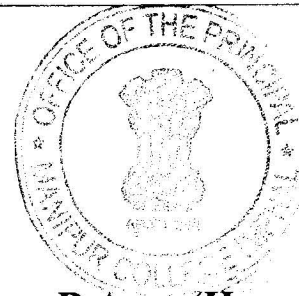




**Manipur University**

**Syllabus for Four-Year B.A. (Hons.)  
Economics**



*S. M.*  
Principal  
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Imphal

Course Structure for B.A. (Hons.) Economics framed under ORDINANCE FOR UNDERGRADUATE PROGRAMMES IN SCIENCE, ARTS AND COMMERCE, 2021

There are a total of eighteen economics core courses that students are required to take across eight 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, six generic elective (GE) courses and some value addition courses.

The Discipline Specific Elective (DSE) Courses are offered in the last four semesters of the 4-year under-graduate programme namely the fifth, sixth, seventh and eighth Semester. One such course will be selected by a student for each of these semesters from a set of courses specified (Groups I and II in the attached table). Further the DSE courses for fifth and seventh semester are to be selected from the list of courses in Group I and for the sixth and eighth semester from the list in Group II. It is recommended that each college should include at least three Discipline Specific Elective (DSE) Courses in each of the Group list to allow the students some minimal element of choice.

The generic elective courses which are meant for students of other departments are being offered from 3<sup>rd</sup> semester through 8<sup>th</sup> semester (a table for it is attached separately). The students are required to take six GE courses during the whole programme, one per semester running through 3<sup>rd</sup> semester to 8<sup>th</sup> semester.

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.

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

### **Semester-I**

1. Economics Core Course 1: Introductory Microeconomics (BECC103)
2. Economics Core Course 2: Mathematical Methods for Economics-I (BECC104)
3. Ability Enhancement Compulsory Course (AECC)-I: Communicative English Skills (BECA101a) / Communication Skills (BECA101b)
4. Skill Enhancement Course (SEC)-I: Data Analysis (BECS102)
5. Value Addition Course (VAC)-I (BECV105)
6. Value Addition Course (VAC)-II (BECV106)

### **Semester-II**

1. Economics Core Course 3: Introductory Macroeconomics (BECC203)
2. Economics Core Course 4: Mathematical Methods for Economics-II (BECC204)
3. AECC-II: Environmental Studies (BECA201)
4. Skill Enhancement Course (SEC)-IIa: Research Methodology (BECS202a)  
or  
SEC-IIb: Contemporary Economic Issues (BECS202b)
5. Value Addition Course (VAC)-III (BECV205)
6. Value Addition Course (VAC)-IV (BECV206)

### **Semester-III**

1. Economics Core Course 5: Intermediate Microeconomics-I (BECC301)
2. Economics Core Course 6: Intermediate Macroeconomics-I (BECC302)
3. Economics Core Course 7: Statistical Methods for Economics (BECC303)
7. Generic Elective (GE) Course-I: Introductory Microeconomics (BECG304)
8. Value Addition Course (VAC)-V (BECV305)

### **Semester-IV**

1. Economics Core Course 8: Intermediate Microeconomics-II (BECC401)
2. Economics Core Course 9: Intermediate Macroeconomics-II (BECC402)
3. Economics Core Course 10: Introductory Econometrics (BECC403)
4. Generic Elective (GE) Course-II: Introductory Macroeconomics (BECG404)
9. Value Addition Course (VAC)-VI (BECV405)

### **Semester-V**

1. Economics Core Course 11: Indian Economy-I (BECC501)
2. Economics Core Course 12: Development Economics-I (BECC502)

3. Discipline Specific Elective(DSE)Course-I(From List of Group-I) (BECD503a/b/c/d/e)
4. GE Course-III: Indian Economy-I (BECG504a) / Money and Banking (BECG504b)
5. Value Addition Course (VAC)-VII (BECV505)

### Semester-VI

1. Economics Core Course 13: Indian Economy-II (BECC601)
2. Economics Core Course 14: Development Economics-II (BECC602)
3. DSE Course-II (From List of Group-II) (BECD803f/g/h/i/j)
4. Generic Elective (GE) Course-IV:  
Indian Economy-II (BECG604a) / Economic History of India 1857-1947 (BECG604b)
5. Value Addition Course (VAC)-VIII (BECV605)

### Semester-VII

1. Economics Core Course 15: International Economics (BECC701)
2. Economics Core Course 16: Public Finance (BECC702)
3. DSE Course-III (From List of Group-I) (BECD503a/b/c/d/e)
4. Generic Elective (GE) Course-V: Environmental Economics (BECG704)

### Semester-VIII

1. Economics Core Course 17: The Economy of Manipur (BECC801)
2. Economics Core Course 18: Environmental Economics (BECC802)
3. DSE Course-IV (From List of Group-II) (BECD803f/g/h/i/j) or Dissertation
4. Generic Elective (GE) Course-VI: Public Finance (BECG804)

### Discipline Specific Elective (DSE) Courses

Group I		Group II	
Index no	Title	Index no	Title
a	Political economy-I	f	Political Economy-II
b	Applied Econometrics	g	Comparative Economic Development (1850-1950)
c	Economic History of India (1857-1947)	h	Financial Economics
d	Money and Financial Markets	I	Economics of Health and Education
e	Cultural Economics	j	Identity Economics

## Generic Elective Courses in Economics

Semester	Course code	Course title
III	BECG304	Introductory Microeconomics
IV	BECG404	Introductory Macroeconomics
V	BECG504a/b	Indian Economy-I / Money and Banking
VI	BECG604a/b	Indian Economy-II / Economic History of India 1857-1947
VII	BECG704	Environmental Economics
VIII	BECG804	Public Finance

### Economics Core Course 1: INTRODUCTORY MICROECONOMICS (BECC103)

#### 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 learning outcome**

1. The students would have learned the basic principles of microeconomic theory, important terms and concepts used in microeconomics etc.
2. The working of the markets is explained in terms of demand and supply in the market. The concept of welfare is also dealt in the context of market operation.
3. The behavior of basic units in consumption and production respectively are explained in terms of key concepts in respective areas.
4. The students would have learned the market structures of a perfectly competitive and monopoly market via their equilibrium states and relevant government policies.
- 5.

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

## **4. The Firm**

Behavior of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run.

## **5. Market Structures:**

Perfectly competitive markets- short run and long-run equilibrium, monopoly- short run and long run equilibrium, monopoly and anti-trust policy, government policies towards competition and imperfect competition.

### *Readings:*

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

## **Economics Core Course 2: MATHEMATICAL METHODS IN ECONOMICS-I (BECC104)**

### **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 learning outcome**

1. The students would have learned the preliminary building blocks to mathematical tools used in basic economic theory.
2. The students would have learned about the mathematical concepts like functions of real variable, characterizations of functions, integration and difference equations.
3. The students will see how these concepts appear in various economic models their significance in specific contexts.
4. The models are illustrations of methods of application of mathematical techniques to economic theory in general.

### **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**

Graphs; elementary types of functions: quadratic, polynomial, power, exponential, logarithmic; sequences and series: convergence, algebraic properties and applications; continuous functions: characterizations, properties with respect to various operations and applications; differentiable functions: characterizations, properties with respect to various operations and applications; second and higher order derivatives: properties and applications.

#### **3. Single-variable optimization**

Geometric properties of functions: convex functions, their characterizations and applications; local and global optima: geometric characterizations, characterizations using calculus and applications.

#### **4. Integration**

Areas under curves, indefinite integrals, the definite integral, integration by parts, integration by substitution, economic applications of integration.

#### **5. Difference equations**

First-order difference equations, compound interest and present discounted values, linear equations with a variable coefficient, second-order equations, second-order equations with constant coefficients

### *Readings:*

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

Alpha C. Chiang and Kevin Wainwright, *Fundamental methods of Mathematical Economics*, McGraw Hill, 4e Indian edition

## **Economics Core Course 3: INTRODUCTORY MACROECONOMICS (BECC203)**

### **Course Core 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 learning outcome**

1. Students in this course will get familiarized with basic concepts of macroeconomics, its subject matter, its difference from microeconomics etc.
2. The students would have learned the basic concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.
3. The students would also have learned the basic structure of a classical and Keynesian system, how macroeconomic variables appear in them.

### **Course Outline**

#### **1. Introduction to Macroeconomics**

Basic issues studied in macroeconomics; Macro vs. Micro Economics; Why Study Macroeconomics? Limitations of Macroeconomics; Stock and Flow variables, Equilibrium and Disequilibrium

#### **2. National Income Accounting**

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, the concept of System of National accounts

#### **3. Money**

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

#### **4. Inflation**

Inflation – Meaning, Causes, Costs and Anti-Inflationary Measures; Inflation and its social costs; hyperinflation.

#### **5. The Closed Economy in the Short Run**

Classical and Keynesian systems; simple Keynesian model of income determination.

#### *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.

### **Economics Core Course 4: MATHEMATICAL METHODS IN ECONOMICS – II (BECC204)**

#### **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 learning outcome**

1. The students will learn the concepts of differential equations, linear algebra, functions of several real variables and multivariable optimization.
2. The students will be able to see how these mathematical concepts are used in building and interpretation of various economic models.

#### **Course Outline**



## **1. Differential equations**

First-order differential equations, separable differential equations, first-order linear differential equations, Qualitative Theory and Stability, second-order differential equations, second-order differential equations with constant coefficients

## **2. Linear algebra**

Vector spaces: algebraic and geometric properties, scalar products, norms, orthogonality; linear transformations: properties, matrix representations and elementary operations; systems of linear equations: properties of their solution sets; determinants: characterization, properties and applications.

## **3. Functions of several real variables**

Geometric representations: graphs and level curves; differentiable functions: characterizations, properties with respect to various operations and applications; second order derivatives: properties and applications; the implicit function theorem, and application to comparative statics problems; homogeneous and homothetic functions: characterizations and applications.

## **4. Multi-variable optimization**

Convex sets; geometric properties of functions: convex functions, their characterizations, properties and applications; further geometric properties of functions: quasiconvex functions, their characterizations, properties and applications; unconstrained optimization: geometric characterizations, characterizations using calculus and applications; constrained optimization with equality constraints: geometric characterizations, Lagrange characterization using calculus and applications; properties of value function: envelope theorem and applications.

*Readings:*

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

Alpha C. Chiang and Kevin Wainwright, *Fundamental methods of Mathematical Economics*, McGraw Hill, 4e Indian edition

## **Economics Core Course 5: INTERMEDIATE MICROECONOMICS – I (BECC301)**

### **Course Description**

The course is designed to provide a sound training in microeconomic theory to formally analyse the behaviour 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 behaviour of the consumer and the producer and also covers the behaviour of a competitive firm.

### **Course learning outcome**

1. The students will learn the ways to analyze the behavior of individual agents through exposure to various microeconomic theories.
2. The students will be taken deeper understanding of the basic concepts through the mathematical tools taken up earlier.
3. Specifically the students would have studied the behavior of consumers and producers and that of a competitive firm.

### **Course Outline**

#### **1. Consumer Theory**

Preference; utility; budget constraint; choice; demand; Slutsky equation; buying and selling; choice under risk and intertemporal choice; revealed preference.

#### **2. Production Theory**

Technology; isoquants; production with one and more variable inputs; returns to scale; profit maximization

#### **3. Theory of Costs**

Short-run and long-run costs; cost curves in the short run and long run; cost minimization

#### **4. Perfect Competition**

Review of perfect competition, nature of demand, supply decision of a competitive firm, the inverse supply function, profits and producer's surplus, the long run supply curve of a firm.

### **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.

## **Economics Core Course 6: INTERMEDIATE MACROECONOMICS – I (BECC302)**

### **Course Description**

This course introduces the students to formal modelling 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 learning outcome**

1. The students would have learned the formal modelling of a macroeconomy in terms of analytical tools.

They would also have learned 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.

3. Various theoretical issues related to an open economy would also have taught.

### **Course Outline**

#### **1. IS-LM model and its policy effects**

#### **2. Aggregate Demand and Aggregate Supply**

Derivation of aggregate demand curve using IS LM framework, Derivation of aggregate supply curve; interaction of aggregate demand and supply.

#### **3. Inflation**

Classical, Keynesian, Monetarist and Modern Theories of Inflation, Deflation- Meaning, Causes, Costs and Anti-Deflationary Measures, Depression and Stagflation; Inflation vs Deflation

#### **4. Unemployment and Expectations**

Phillips curve; adaptive and rational expectations; policy ineffectiveness debate.

#### **5. Open Economy Models**

Short-run open economy models; Mundell-Fleming model; exchange rate determination; purchasing power parity; asset market approach; Dornbusch's overshooting model; monetary approach to balance of payments; international financial markets.

#### **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, 2<sup>nd</sup> 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.

## **Economics Core Course 7: STATISTICAL METHODS FOR ECONOMICS (BECC303)**

### **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 learning outcome**

1. The students would have learned some basic concepts and terminology that are fundamental to statistical analysis and inference.
2. The notion of probability, probability distributions of discrete and continuous random variables and of joint distributions would have been learned.
3. They will be taught sampling techniques used to collect survey data as well as the notion of sampling distributions that act as a bridge between probability theory and statistical inference.
4. They would also have learned some topics in statistical inference that include point and interval estimation.

### **Course Outline**

#### **1. Introduction and Overview**

The distinction between populations and samples and between population parameters and sample statistics; the use of measures of location and variation to describe and summarize data; population moments and their sample counterparts.

#### **2. Elementary Probability Theory**

Sample spaces and events; probability axioms and properties; counting techniques; conditional probability and Bayes' rule; independence.

### **3. Random Variables and Probability Distributions**

Defining random variables; probability distributions; expected values of random variables and of functions of random variables; properties of commonly used discrete and continuous distributions (uniform, binomial, normal, Poisson and exponential random variables).

### **4. Random Sampling and Jointly Distributed Random Variables**

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

### **5. Sampling**

Principal steps in a sample survey; methods of sampling; the role of sampling theory; properties of random samples.

### **6. Point and Interval Estimation**

Estimation of population parameters using methods of moments and maximum likelihood procedures; properties of estimators; confidence intervals for population parameters.

#### *Readings:*

1. Jay L. Devore, *Probability and Statistics for Engineers*, Cengage Learning, 2010.
2. John E. Freund, *Mathematical Statistics*, Prentice Hall, 1992.
3. Richard J. Larsen and Morris L. Marx, *An Introduction to Mathematical Statistics and its Applications*, Prentice Hall, 2011.
4. William G. Cochran, *Sampling Techniques*, John Wiley, 2007.

## **Economics Core Course 8: INTERMEDIATE MICROECONOMICS – II (BECC401)**

### **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 learning outcome**

1. The students would have learned the topics and concepts pertaining to general equilibrium and welfare, imperfect markets and topics under information economics.
2. The basic concepts in behavioral economics would also have been taught.

## **Course Outline**

### **1. General Equilibrium, efficiency and welfare**

Equilibrium in a pure exchange economy, Walrasian General Equilibrium model, Pareto efficiency and welfare

### **2. Market Structure**

Monopoly; pricing with market power; price discrimination; peak-load pricing; two-part tariff; monopolistic competition and oligopoly, collusive oligopoly-cartels; non-collusive oligopoly- Cournot, Bertrand, Stackelberg;

### **3. Game theory**

Game theory and competitive strategy- Concepts; Nash Equilibrium: Theory and Applications; Mixed Strategy Equilibrium.

### **4. Market Failure**

Externalities; public goods, Adverse Selection, Moral Hazard and Principal-Agent Model

### **5. Behavioural Economics**

Some basic concepts - Rational theory vs prospect theory, bounded rationality, mental accounting, information avoidance, dual system theory.

#### *Readings:*

1. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, 8th edition, W.W. Norton and Company/Affiliated East-West Press (India), 2010. The workbook by Varian and Bergstrom could be used for problems.
2. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.
3. Alain Samson, Ph. D., *Behavioural Economics Guide* 2014.

## **Economics Core Course 9: INTERMEDIATE MACROECONOMICS – II (BECC402)**

### **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 learning outcome**

1. The students will learn the long run dynamic issues like growth and technical progress.
2. The micro foundations to the various aggregate concepts are also provided to the students.
3. The students will also learn the forms and elements in fiscal and monetary policy and various schools of macroeconomic thoughts in brief.

## **Course Outline**

### **1. Economic Growth**

Harrod-Domar model; Solow model; golden rule; technological progress and elements of endogenous growth.

### **2. Micro Foundations of Macroeconomics**

Consumption: Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle and permanent income hypotheses; rational expectations and random-walk of consumption expenditure. Investment: determinants of business fixed investment; residential investment and inventory 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. Fiscal and Monetary Policy**

Active or passive; monetary policy objectives and targets; rules versus discretion: time consistency; the government budget constraint; government debt and Ricardian equivalence.

### **5. Schools of Macroeconomic Thoughts**

Classicals; Keynesians; New-Classicals and New-Keynesians.

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, 2<sup>nd</sup> 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.

## **Economics Core Course 10: INTRODUCTORY ECONOMETRICS (BECC403)**

### **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 learning outcome**

1. The students would learn the basic econometric concepts and techniques and statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models.
2. The course also teach the consequences of and tests for misspecification of regression models.

### **Course Outline**

#### **1. Nature and Scope of Econometrics**

#### **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; tests for comparing parameters from two samples.

#### **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<sup>2</sup> and adjusted R<sup>2</sup>; partial regression coefficients; testing hypotheses – individual and joint; functional forms of regression models; qualitative (dummy) independent variables.

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

Multicollinearity; heteroscedasticity; serial correlation.

#### **6. Specification Analysis**

Omission of a relevant variable; inclusion of irrelevant variable; tests of specification errors.

#### *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, 4<sup>th</sup> edition, International Edition, 2009.
5. Christopher Dougherty, *Introduction to Econometrics*, Oxford University Press, 3rd edition, Indian edition, 2007.
6. Jan Kmenta, *Elements of Econometrics*, Indian Reprint, Khosla Publishing House, 2nd edition, 2008.

### **Economics Core Course 11: INDIAN ECONOMY-I (BECC501)**

#### **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. This course also tries to incorporate the economic development issues and challenges of the Northeastern India.

#### **Course learning outcome**

1. The students will try to understand the development path of India since independence as paradigm shifts and turning points in the growth path of India.
2. The very important topic of growth and distribution will also be taught.
3. The students will also learn about the change in the structure of institutions responsible for planning and growth of the country.

4. The various aspects of economy of North eastern region of India including main economic activities of the region, natural resources will also be taught in this course.

## **Course Outline**

### **Unit 1**

Concept of Developed and Developing Economies

Characteristics of a developing economy – basic features of Indian economy at the time of independence, Economic development since independence

### **Unit 2**

Population and Economic Development - Demographic trends of India –Concept of Demographic Dividend - Occupational Structure - Population policy, Employment in organised and unorganised sectors.

### **Unit 3**

Growth and Distribution: Poverty, inequality, employment – organised and unorganised, unemployment and policy interventions relating to poverty, inequality and unemployment.

### **Unit 4**

Issues in Indian Planning – Objectives and critical evaluation of each plan, Centre-State relationship, Niti Aayog and Planning Commission.

### **Unit 5**

Economy of North-Eastern Region: Basic Features: Trends of state GDP and Sector-Wise contribution, Occupational Pattern; Natural Resources: Land, Water and Forest Resources; Agriculture: Cropping Pattern; Industry: Importance, conditions, Small-Scale Industries, Role of NEC; Tourism: importance, potential and challenges; Act East Policy and North East India.

### *Readings:*

1. Balakrishnan, P. (2007). The recovery of India: Economic growth in the Nehru era. *Economic and Political Weekly*, 42(45-46), 52-66.
2. Bardhan, P.(2012). *Awakening giants, feet of clay: Assessing the economic rise of China and India*. Princeton University Press.
3. Basu, K., Maertens, A. (2007). The pattern and causes of economic growth in India. *Oxford Review of Economic Policy*, 23, 143-167.
4. Bhagwati, J., Panagariya, A.(2012). *India's tryst with destiny*, Collins Business.
5. Centre for Sustainable Employment. (2018). *State of working India 2018*. Azim Premji University.
6. Desai, S. (2015). Demographic deposit, dividend and debt. *The Indian Journal of Labour Economics*, 58, 217-232.
7. Dreze, J., Khera, R. (2017). Recent social security initiatives in India, *World Development*, 98, 555-572.

8. Dreze, J., Sen, A. (2013). India: An uncertain glory. Allen Lane.
9. Joshi, V. (2016). India's long road: The search for prosperity. Allen Lane.
10. Meenakshi, J. (2016). Trends and patterns in the triple burden of malnutrition in India. *Agricultural Economics*, 47, 115-134.
11. Ministry of Finance. (2016). Universal basic income: A conversation with and within the mahatma. Chapter 9 in *Economic Survey*, 172-212.
12. Panagariya, A., Mukim, M. (2014). A comprehensive analysis of poverty in India. *Asian Development Review*, 31, 1-52.
13. Rangarajan Committee. (2014). Report of the expert group to review the methodology for measurement of poverty. Government of India.
14. Rawal, V., Bansal, V., Bansal, P. (2019). Prevalence of undernourishment in Indian states: Explorations based on NSS 68th round data. *Economic and Political Weekly*, 54(15), 35-45.
15. Rodgers, G. (2018). Inequality in the Indian growth regime. *Indian Journal of Human Development*, 12, 134-148.
16. Thomas, J. (2014). India's labour market during the 2000s: An overview. In K. Ramaswamy (ed.): *Labour, employment and economic growth in India*. Cambridge University Press, 21-56.
17. Verick, S. (2018). Female labor force participation and development. *IZA World of Labor*, 2, 1-11.
18. Bansil, P.C, *Agricultural Problems of India*, Vikas Publishing House Pvt. Ltd.
19. Datt, R. and Sundharam, K.P.M, *Indian Economy*, S. Chand & Company Ltd, New Delhi.
20. Kapila, U. (2008-09), *Indian Economy since Independence*, Academic Foundation, New Delhi.
21. Mookherjee, D. (1997), *Indian Industry: Policies and Performance*, Oxford University Press,
22. North-East Vision Document (2020).
23. Shukla Commission Report (1997)

## **Economics Core Course 12: DEVELOPMENT ECONOMICS-I (BECC502)**

### **Course Description**

This is the first part of a two-part course on economic development. The course begins with a discussion of alternative conceptions of development and their justification. It then proceeds to aggregate models of growth and cross-national comparisons of the growth experience that can help evaluate these models. The axiomatic basis for inequality measurement is used to develop measures of inequality and connections between growth and inequality are explored. The course ends by linking political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance.

### **Course learning outcome**

1. The students will learn about the alternative conceptions of development and their justification.

2. The students will also learn aggregate models of growth and cross-national comparisons of the growth experience.
3. They will also learn definitions, measures and mechanisms concerning the topic of poverty and inequality required in going further deep into this topic.
4. They will also learn the role of the State in economic development and also the informational and incentive problem that affect the State governance.

## **Course Outline**

### **1. Conceptions of Development**

Economic growth vs Development, weaknesses of Income measures, Alternative measures of development, documenting the international variation in these measures, comparing development trajectories across nations and within them.

### **2. Growth Models and Empirics**

The Harrod-Domar model, the Solow model and its variants, endogenous growth models and evidence on the determinants of growth.

### **3. Poverty and Inequality: Definitions, Measures and Mechanisms**

Inequality axioms; connections between inequality and development -Kuznet Curve; a comparison of commonly used inequality measures –Lorenz curve, Gini coefficient, Decile ratio, Quintile ratio and Palma ratio

Poverty: Absolute and relative Poverty; Popular measures - Poverty line, Head Count Ratio, Multidimensional Poverty (MPI); Vicious Circle of Poverty (poverty trap) and path dependence of growth processes.

### **4. Political Institutions and the Functioning of the State**

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.

#### *Readings:*

1. Debraj Ray, *Development Economics*, Oxford University Press, 2009.
2. Partha Dasgupta, *Economics, A Very Short Introduction*, Oxford University Press, 2007.
3. Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, *Understanding Poverty*, Oxford University Press, 2006.
4. Kaushik Basu, *The Oxford Companion to Economics in India*, OUP, 2007.
5. Amartya Sen, *Development as Freedom*, OUP, 2000.

6. Daron Acemoglu and James Robinson, *Economic Origins of Dictatorship and Democracy*, Cambridge University Press, 2006.

7. Robert Putnam, *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton University Press, 1994

## **Economics Core Course 13: INDIAN ECONOMY-II (BECC601)**

### **Course Description**

This course examines sector-specific policies and their impact in shaping trends in key economic indicators in India. It highlights major policy debates and evaluates the Indian empirical evidence. Given the rapid changes taking place in the country, the reading list will have to be updated annually.

#### **Course learning outcome**

1. The students will learn how the Indian economy was doing sector-wise, the shaping trends giving push to the overall growth to the economy.
2. The students will also get acquainted with the kind of policy debates in regard to sectoral push, their impact on people as well as on economic key indicators in India.
3. The students would also get a measure of performance of economy via empirical evidence.

### **Course Outline**

#### **Unit 1**

Policies and performance in agriculture: Importance of Agriculture in Indian economy – trends in agriculture production and productivity, Green Revolution and Food Security, Agriculture Price Policy, Sources of Agricultural Finance and Sustainable Agricultural Growth

#### **Unit 2**

Policies and performance in industry: Industrial Policy – pre and post 1991 and trends in India's industrial growth and productivity, Small vs. large industry, public vs. private sector industries, disinvestment strategies, Policy issues and future prospects: infrastructure, technology and regional imbalances

#### **Unit 3**

Policies and performance in tertiary sector: Foreign Trade of India, India's balance of payments, SEZs, WHO and India's Foreign Trade, banking in India, E – commerce and logistics

#### Unit 4

Contemporary Issues: Macro-economic stabilisation – fiscal and monetary policies, Globalisation and its impact on the Indian economy with special reference to global financial crisis, 2007- 08, India and the World Economics, India's foreign trade and investment policies, Indian Economy and Pandemic

#### References

Given the topical nature of this course, readings will be updated from year to year.

1. Anand, R., Kochhar, K., Mishra, S. (2015). Make in India: Which exports can drive the next wave of growth? IMF working paper, WP/15/119.
2. Banga, R. (2014). Trade facilitation and 'hollowing-out' of Indian manufacturing. *Economic and Political Weekly*, 49(40), 57-63.
3. Basole, A., Basu, D., Bhattacharya, R. (2015). Determinants and impacts of subcontracting: Evidence from India's unorganised manufacturing sector. *International Review of Applied Economics*, 29, 374-402.
4. Bhagwati, J., Panagariya, A. (2012). A multitude of labor laws and their reforms. In *India's trust with destiny*. Collins Business.
5. Centre for Sustainable Employment. (2018). *State of working India 2018*. Azim Premji University.
6. Chanda, R. (2017). Services for Indian manufacturing. In M. Dev (ed.) *India Development Report*.
7. Chatterjee, S., Kapur, D. (2017). Six puzzles in Indian agriculture. *India Policy Forum 2016*, Vol. 17.
8. Das, D., Singh, J., Choudhury, H. (2018). Judicial production of labour market flexibility: Contract labour employment in Indian organised manufacturing. In Hill and Patil (eds.): *Employment policy in emerging economies*. Routledge.
9. Deakin, S., Halder, A. (2015). How should India reform its labor laws? *Economic and Political Weekly*, 50(12), 48-55.
10. Gulati, A., Saini, S. (2017) 25 years of policy tinkering in agriculture. In R. Mohan (ed.): *India transformed: 25 years of economic reforms*. Penguin.
11. Kapoor, R., Krishnapriya, P. (2019). Explaining the contractualisation of India's workforce. *ICRIER Working Paper 369*.
12. Kumar, N. (2015). FDI and portfolio investment flows and development: A perspective on Indian experience. In U. Kapila (ed.): *Indian economy since independence*, 26th ed. Academic Foundation.
13. Ministry of Finance. (2017). Climate, climate change and agriculture. Ch. 6 in *Economic Survey*.
14. Mohan, R., Ray, P. (2017). Indian financial sector - structure, trends and turns. *IMF working paper*.
15. Panda, M. (2017). Macroeconomic development and challenges for growth. In M. Dev (ed.): *India Development Report*.
16. Rajesh, S., Sen, K. (2016). Some puzzles about firms. *Economic and Political Weekly*, 51(7), 43-51.

17. Roychowdhury, A. (2019). Application of job security laws, workers' bargaining power and employment outcomes in India. *The Economic and Labour Relations Review*, 30, 120-141.
18. Sen, K., Das, D. (2015). Where have all the workers gone? The puzzle of declining labour intensity in organised Indian manufacturing. *Economic and Political Weekly*, 50(23), 108-115.
19. Veeramani, C., Dhir, G. (2017). Make what in India? In M. Dev (ed.): *India Development Report*.

## **Economics Core Course 14: DEVELOPMENT ECONOMICS-II (BECC602)**

### **Course Description**

This is the second module of the economic development sequence. It begins with basic demographic concepts and their evolution during the process of development. The structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. The governance of communities and organizations is studied and this is then linked to questions of sustainable growth. The course ends with reflections on the role of globalization and increased international dependence on the process of development.

### **Course learning outcome**

1. The students will learn the basic demographic concepts and their evolution during the process of development.
2. The problems of enforcement experienced in poor countries seen through the prism of structure of markets and contracts will be taught.
3. The governance of communities and organizations is studied and this is then linked to questions of sustainable growth.
4. The students will be taught on the role of globalization and increased international dependence on the process of development.

### **Course Outline**

#### **1. Demography and Development**

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, gender and labor market.

#### **2. Land, Labour and Credit Markets**

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; interlinkages between rural factor markets.

### **3. Individuals, Communities and Collective Outcomes**

Individual behaviour in social environments, multiple social equilibria; governance in organizations and in communities; individual responses to organizational inefficiency.

### **4. Environment and Sustainable Development**

Defining sustainability for renewable resources; a brief history of environmental change; common-pool resources; environmental externalities and state regulation of the environment; economic activity and climate change.

### **5. Globalization**

Globalization in historical perspective; the economics and politics of multilateral agreements; trade, production patterns and world inequality; financial instability in a globalized world.

#### *Readings:*

1. Debraj Ray, *Development Economics*, Oxford University Press, 2009.
2. Partha Dasgupta, *Economics, A Very Short Introduction*, Oxford University Press, 2007.
3. Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, *Understanding Poverty*, Oxford University Press, 2006.
4. Thomas Schelling, *Micromotives and Macrobehavior*, W. W. Norton, 1978.
5. Albert O. Hirschman, *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States*, Harvard University Press, 1970.
6. Raghuram Rajan, *Fault Lines: How Hidden Fractures Still Threaten the World Economy*, 2010.
7. Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press, 1990.
8. Dani Rodrik, *The Globalization Paradox: Why Global Markets, States and Democracy Can't Coexist*, Oxford University Press, 2011.
9. Michael D. Bordo, Alan M. Taylor and Jeffrey G. Williamson (ed.), *Globalization in Historical Perspective*, University of Chicago Press, 2003.

Michael P Todaro and Stephen. C. Smith, *Economic Development* 12th Edition. Pearson Publications



## **Economics Core Course 15: INTERNATIONAL ECONOMICS (BECC701)**

### **Course Description**

This course develops a systematic exposition of models that try to explain the composition, direction, and consequences of international trade, and the determinants and effects of trade policy. It then builds on the models of open economy macroeconomics developed in courses 08 and 12, focusing on national policies as well as international monetary systems. It concludes with an analytical account of the causes and consequences of the rapid expansion of international financial flows in recent years. Although the course is based on abstract theoretical models, students will also be exposed to real-world examples and case studies.

#### **Course learning outcome**

1. The students would have learned the composition, direction, and consequences of international trade, and the determinants and effects of trade policy via models studied.
2. They would also be acquainted with the working of open economy macroeconomics where the focus is on national policies and international monetary fund.
3. They will also learn the causes and consequences of the rapid expansion of international financial flows in recent years.
4. The students will also be exposed to real world examples and case studies.

### **Course Outline**

#### **Unit 1**

What is international economics? An overview of world trade. Stylized facts about international trade

#### **Unit 2**

Ricardian trade theory (notion of comparative advantage and gains from trade due to specialisation); an introduction to the distributional effects of trade; the specific factor model; Heckscher-Ohlin theory: Rybczinski and Stolper-Samuelson theorems; Heckscher-Ohlin theorem; factor price equalisation

#### **Unit 3**

Balance of payments and its components, Exchange Rate Determination, System of Fixed and Floating Exchange Rate; Theories of Exchange rates: Mint- Paper theory and Purchasing Power Parity theory – India's exchange rate policy.

#### **Unit 4**

Instruments of trade policy; tariffs, quotas, export subsidies, voluntary export restraints. The economics of trade policy; political economy of trade policy; controversies in trade policy

#### **Unit 5**

The evolving trends of world economy – the shift of the centre of gravity from West to East and from North to South; Indian Economy and the Globalizing World – Regional Cooperation and World Economic Integration – SAARC, BRICS, ASEAN and Act – East Policy; Relevance of Global Economic Governance – World Bank, IMF, WTO

*Readings:*

1. Paul Krugman, Maurice Obstfeld, and Marc Melitz, *International Economics: Theory and Policy*, Addison-Wesley (Pearson Education Indian Edition), 9th edition, 2012.
2. Dominick Salvatore, *International Economics: Trade and Finance*, John Wiley International Student Edition, 10th edition, 2011.
3. Bo Sodersten and Geoffrey Reed, *International Economics*. Palgrave Macmillan

**Economics Core Course 16: PUBLIC FINANCE (BECC702)**

**Course Description**

Public economics is the study of government policy from the points of view of economic efficiency and equity. The paper deals with the nature of government intervention and its implications for allocation, distribution and stabilization. Inherently, this study involves a formal analysis of government taxation and expenditures. The subject encompasses a host of topics including public goods, market failures and externalities. The paper is divided into two sections, one dealing with the theory of public economics and the other with the Indian public finances.

**Course learning outcome**

1. The students would have learned the nature of government fiscal intervention and its implications for allocation, distribution and stabilization.
2. Specifically, they will learn about the government taxation and expenditure.
3. They will learn about other topics as well including public goods, market failures and externalities.

**Course Outline**

**1. Role of government**

- a. Fiscal functions: An over view
- b. Public goods: Definition, characteristics- exclusion and non-rivalry, pure and impure public goods, free rider problem, merit goods
- c. Externalities: The problems and solutions, taxes vs regulation, property rights, Coase theorem

**2. Public expenditure theory**

- a. Wagner's law, Peacock -Wiseman hypothesis, Cost - Benefit analysis, Multiplier and accelerator effects

### **3. Taxation**

- a. Principles of taxation- Ability to pay, benefit approach; elasticity and buoyancy of taxation; tax shifting
- b. Tax structure in India; Value added tax, Goods and Services Tax

### **4. Budgeting and fiscal policy**

- a. Concepts – Revenue account, capital account, deficits; economic and functional classification of budget, Balanced and unbalanced budget; Budget preparation
- b. Fiscal policy – Fiscal policy in under developed countries

### **5. Federal finance**

- a. Horizontal and vertical fiscal imbalances; decentralization, merits and demerits of decentralization
- b. Centre-state financial relations in India, Finance Commission, latest Finance Commission recommendations; Planning Commission and Niti Ayog, Local bodies in India

#### *Readings:*

1. Bhatia, H.L. (2020). *Public finance*, New Delhi: Vikas Publications.
2. Musgrave, R.A. and Musgrave, P.B. (1989). *Public Finance in theory and practice*. Singapore: McGraw Hills.
3. Rao, Hemlata (2006). *Fiscal Federalism, Issues and Policies*, New Delhi: New Century Publications
4. Rao, M. (2005). 'Changing contours of federal fiscal arrangements in India'. In A. Bagchi (ed.): *Readings in public finance*. Oxford University Press.
5. Reddy, Y. (2015). Fourteenth finance commission: Continuity, change and way forward. *Economic and Political Weekly*, 50(21), 27-36.
6. Economic Survey, Government of India (Latest).
7. State Finances: A Study of Budgets, Reserve Bank of India (Latest).

## **Economics Core Course 17: THE ECONOMY OF MANIPUR (BECC801)**

### **Course learning outcome**

1. The students will be acquainted the economic history of Manipur from pre-colonial times.
2. Taking into account of its people, resource base and political set-ups at various junctures of time, the developmental path of the State since pre-colonial time will be taught.

To be drafted :

The following topics to be covered:

# Peopling and Economic Geography; Migrations, Physiography and Natural Resource Base

# Pre-colonial Economy; Agriculture, Land Relation and Trade

# Colonial Economy; Structural Changes in Agriculture, Industry and Trade

# Institutional Change and Post-colonial Economy, Modernization of Economy, Pre-statehood and post-statehood Economy, Post Planning Economy and Act East Policy

## **Economics Core Course 18: ENVIRONMENTAL ECONOMICS (BECC802)**

### **Course Description**

This course focuses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies. Economic implications of environmental policy are also addressed as well as valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments. Selected topics on international environmental problems are also discussed.

### **Course learning outcome**

1. The students will learn the linkage of the current environmental problems of the world with economic factors.
2. The students will learn the application of economic principles to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies.
3. The students will also get familiarized with economic implications of environment policies.
4. Concepts like valuation of environmental quality, quantification of environmental damages, inclusive cost-benefit analysis of projects, environmental impact analysis will also be taught.

### **Course Outline**

#### **1. Introduction**

What is environmental economics; review of microeconomics and welfare economics.

#### **2. The Theory of Externalities**

Pareto optimality and market failure in the presence of externalities; property rights and the Coase theorem.

#### **3. The Design and Implementation of Environmental Policy**

Overview; Pigouvian taxes and effluent fees; tradable permits; choice between taxes and quotas under uncertainty; implementation of environmental policy.

#### **4. International Environmental Problems**

Trans-boundary environmental problems; economics of climate change; trade and environment.

#### **5. Measuring the Benefits of Environmental Improvements**

Non-Market values and measurement methods; risk assessment and perception.

#### **6. Sustainable Development**

Concepts; measurement.

*Readings:*

1. Charles Kolstad, *Intermediate Environmental Economics*, Oxford University Press, 2nd edition, 2010.
2. Robert N. Stavins (ed.), *Economics of the Environment: Selected Readings*, W.W. Norton, 5th edition, 2005.
3. Roger Perman, Yue Ma, James McGilvray and Michael Common, *Natural Resource and Environmental Economics*, Pearson Education/Addison Wesley, 3rd edition, 2003.
4. Maureen L. Cropper and Wallace E. Oates, 1992, Environmental Economics: A Survey, *Journal of Economic Literature*, Volume 30:675-740.

### **DISCIPLINE SPECIFIC ELECTIVE (DSE) PAPERS: GROUP-I**

#### **(i) POLITICAL ECONOMY-I (BECD1a)**

##### **Course Description**

This course explores changes in the organisation of production, labour market institutions and corporate structure. It goes on to study the consequences of globalization, especially of financial flows, for the role of the state, economic performance, gender issues, environment, human welfare and development.

##### **Course learning outcome**

1. The students will learn the changes in the organisation of production, labour market institutions and corporate structure over time.
2. They will also learn about the consequences of globalization, especially of financial flows, for the role of the state, economic performance, gender issues, environment, human welfare and development.

## **Course Outline**

### **1. Introduction and Historical Overview**

Perspective on political economy with a historical overview: capitalist development in the pre-second world war period, the golden age and later.

### **2. Changing Dynamics of Capitalist Production, Organisational Form and Labour Process**

Fordist and post-Fordist production; changing dynamics of organisation of production, markets and labour process; the changing nature of job security and labour rights.

### **3. The State in the Era of Globalisation: Welfare, Development and Autonomy**

Globalisation and the limits of the welfare state, development and state autonomy.

### **4. Globalisation and The Changing Role of Finance**

The changing role of finance in capital accumulation and corporate structure; finance and globalisation - financialisation, financial liberalisation and financial crisis.

### **5. The Social Dimension**

Globalisation and uneven development – growth, inequality and exclusion.

### **6. New Perspectives**

Gender in work, accumulation and globalisation; issues in environment and sustainability; alternatives ahead.

#### *Readings:*

1. Michel Beaud, *A History of Capitalism, 1500-2000*, trans. by Tom Dickman and Anny Lefebvre, New York: Monthly Review Press, 2001.
2. Ash Amin (ed.), *Post-Fordism: A Reader*, Blackwell, 1994.
3. Fran Tonkiss, *Contemporary Economic Sociology: Globalisation, Production, Inequality*, Chapter 4 (Fordism and After), Routledge India 2008 reprint, 2006.
4. S. Hymer, "The Multinational Corporation and the Law of Uneven Development", in H. Radice (ed.) *International Firms and Modern Imperialism*, Penguin Books, 1975.
5. G. Gereffi, J. Humphrey and T. Sturgeon, 2005, "The Governance of Global Value Chains", *Review of International Political Economy*, Volume 12: 78–104.
6. Narasimha Reddy, "Economic Globalisation, Past and Present – The Challenges to Labour" in Jomo K.S. & Khoo Khay Jin (ed.) *Globalization and Its Discontents, Revisited*, Sphix -Tulika Books, 2003.

7. David Harvey, *A Brief History of Neoliberalism*, OUP, 2005.
8. Andrew Glyn, Challenges to Capital , in *Capitalism Unleashed: Finance, Globalization and Welfare*, Oxford: Oxford University Press, (Ch. One, pp. 1-24), 2006.
9. G Duménil and D Levy, *The Crisis of Neoliberalism*, Harvard University Press, 2011.
10. K.S. Jomo (ed.), *The Long Twentieth Century: The Great Divergence: Hegemony, Uneven Development and Global Inequality*, OUP, 2006.
11. Gary Dymally, 2005, Financial Globalization, Social Exclusion and Financial Crisis , *International Review of Applied Economics*, Vol. 19: 439–457.
12. E. Stockhammer, Financialization and the Global Economy , in G. Epstein and M.H. Wolfson (ed.) *The Political Economy of Financial Crises*, Oxford University Press, 2010. [Also in Working Paper Series, No. 240, Political Economy Research Institute, University of Massachusetts Amherst]
13. J.P. Smith and M.P. Ward, 1989, Women in the Labour Market and in the Family , *Journal of Economic Perspectives*, Volume 3: 9-23.
14. Marilyn Power, 2004, Social Provisioning as a Starting Point for Feminist Economics , *Feminist Economics*, Volume 10: 3-19.
15. John Bellamy Foster, *Ecology against Capitalism*, Monthly Review Press, 2002

## **(ii) APPLIED ECONOMETRICS (BECDIb)**

### **Course Description**

The aim of this course is to provide a foundation in applied econometric analysis and develop skills required for empirical research in economics. Topics include specification and selection of regression models, dynamic econometric models, advanced methods in regression analysis and panel data models. Since the emphasis is on application of methods, this course requires understanding of econometric software and computing skills.

### **Course learning outcome**

1. The students will be equipped with tools and methods and skills required for empirical research in economics.
2. The students will learn topics such as specification and selection of regression models, dynamic econometric models, advanced methods in regression analysis and panel data to hone their skills in empirical econometrics exercises.
3. The students will also learn the software and computing skills of some popular and versatile softwares.

## **Course Outline**

### **1. Stages in Empirical Econometric Research**

### **2. Regression Diagnostics and Specification**

**Misspecification; functional forms; model selection.**

### **3. Advanced Topics in Regression Analysis**

Selected Topics: Dynamic Econometric Models: distributed lag models; autoregressive models; instrumental variable estimation; simultaneous equation models.

### **4. Panel Data Models**

Methods of estimation; fixed effects model; random effects model.

### **5. Introduction to Econometric Software Package**

GRETTL; E-VIEWS; STATA (any one).

#### *Readings:*

1. Jeffrey M. Wooldridge, *Econometrics*, CENGAGE learning, India Edition, 2009.
2. Dimitrios Asteriou and Stephen Hall, *Applied Econometrics: A Modern Approach*, Palgrave Macmillan, 2007.
3. Damodar Gujarati, *Econometrics by Example*, Palgrave Macmillan, 2011.

## **(iii) ECONOMIC HISTORY OF INDIA (1857-1947) (BECDIc)**

### **Course Description**

This course analyses key aspects of Indian economic development during the second half of British colonial rule. In doing so, it investigates the place of the Indian economy in the wider colonial context, and the mechanisms that linked economic development in India to the compulsions of colonial rule. This course links directly to the course on India's economic development after independence in 1947.

#### **Course learning outcome**

1. They will learn the key aspects of Indian economic development during the second half of British colonial rule.
2. They will learn how the structure of the Indian economy was linked to the compulsions of colonial rule.



## Course Outline

### 1. **Introduction:** Colonial India: Background and Introduction

Overview of colonial economy.

### 2. **Macro Trends**

National Income; population; occupational structure.

### 3. **Agriculture**

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

### 4. **Railways and Industry**

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**

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.

#### *Readings:*

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. J. Krishnamurty, *Occupational Structure*, Dharma Kumar (editor), The Cambridge Economic History of India, Vol. II, (henceforth referred to as CEHI), 2005, Chapter 6.
5. Irfan Habib, *Indian Economy 1858-1914*, A People’s History of India, Vol.28, Tulika, 2006.
6. Ira Klein, 1984, When Rains Fail: Famine relief and mortality in British India , *IESHR*
7. Jean Dreze, *Famine Prevention in India in Dreze and Sen (eds.) Political Economy of Hunger*, WIDER Studies in Development Economics, 1990, pp.13-35.
8. John Hurd, *Railways*, CEHI, Chapter 8, pp.737-761.
9. Rajat Ray (ed.), *Entrepreneurship and Industry in India*, 1994.

10. AK Bagchi, Deindustrialization in India in the nineteenth century: Some theoretical implications , *Journal of Development Studies*, 1976.
11. MD Morris, *Emergence of an Industrial Labour Force in India*, OUP 1965, Chapter 11, Summary and Conclusions.
12. K.N. Chaudhuri, *Foreign Trade and Balance of Payments*, CEHI, Chapter 10.
13. B.R. Tomlison, 1975, *India and the British Empire 1880-1935*, IESHR, Vol.XII.
14. Dharma Kumar, *The Fiscal System*, CEHI, Chapter 12.
15. Basudev Chatterjee, *Trade, Tariffs and Empire*, OUP 1992, Epilogue. Background reading for students: Irfan Habib, *Indian Economy 1858-1914 (A People's History of India)*, Vol.28, Tulika 2006. Daniel Thorner, *Agrarian Prospect in India*, 1977. L. Visaria and P. Visaria, *Population*. CEHI, Chapter 5.

#### **(iv) MONEY AND FINANCIAL MARKETS (BECDIId)**

##### **Course Description**

This course exposes students to the theory and functioning of the monetary and financial sectors of the economy. It highlights the organization, structure and role of financial markets and institutions. It also discusses interest rates, monetary management and instruments of monetary control. Financial and banking sector reforms and monetary policy with special reference to India are also covered.

##### **Course learning outcome**

1. The students would have learned about the theory and functioning of the monetary and financial sectors of the economy.
2. Specifically, they would have learned the organization, structure and role of financial markets and institutions.
3. They will also learn concepts like interest rates, monetary management and instruments of monetary control.
4. Financial and banking sector reforms and monetary policy with special reference to India will also be taught.

##### **Course Outline**

###### **1. Money**

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

###### **2. Financial Institutions, Markets, Instruments and Financial Innovations**

a. Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises.

b. Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations.

### **3. Interest Rates**

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

### **4. Banking System**

a. Balance sheet and portfolio management.

b. Indian banking system: Changing role and structure; banking sector reforms.

### **5. Central Banking and Monetary Policy**

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

#### *Readings:*

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

2. F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, *Foundations of Financial Markets and Institutions*, Pearson Education, 3rd edition, 2009.

3. M. R. Baye and D. W. Jansen, *Money, Banking and Financial Markets*, AITBS, 1996.

4. Rakesh Mohan, *Growth with Financial Stability- Central Banking in an Emerging Market*, Oxford University Press, 2011.

5. L. M. Bhole and J. Mahukud, *Financial Institutions and Markets*, Tata McGraw Hill, 5th edition, 2011.

6. M. Y. Khan, *Indian Financial System*, Tata McGraw Hill, 7th edition, 2011.

7. N. Jadhav, *Monetary Policy, Financial Stability and Central Banking in India*, Macmillan, 2006.

8. R.B.I. – *Report of the Working Group: Money Supply Analytics and Methodology of Compilation*, 1998.

9. R.B.I. Bulletin, Annual Report and Report on Currency and Finance (latest).

### **(V) Cultural Economics (BECD1e)**

#### **Course learning outcome**

1. The students will learn the connection between cultural sector and economy.

2. They will learn about the constituents or components of the cultural sector including the organizational set-up, their activities etc.
3. They will be taught to see the workings and activities in the cultural sector through the prism of market operations.

### **Unit 1: Introduction to cultural economics**

A brief history of cultural economics, History of economic thought on the economics of the arts and heritage, Cultural economics and the creative industries

### **Unit 2: Economic profile of the cultural sector**

Public and private ownership in the cultural sector, Cultural policy, Measuring the size of the cultural sector, Markets for cultural goods and services

### **Unit 3: Economic organisation of the creative industries,**

**The art market, Museums, The publishing industry, The music industry,** The performing arts, The film industry, Broadcasting

### **Unit 4: Economics of performing arts and creative industries**

Economic characteristics of the performing arts, Baumol and Bowen and the 'cost disease', Participation rates and consumer expenditure on the performing arts, Sources of finance for the performing arts, Pricing the performing arts, Structure of creative industries, Classifying creative industries, Copyright as the basis for the creative industries,

### **Unit 5: Economics of artists' labour market theories**

Who is an artist?, Supply of labour in the arts, Wage rates, salaries and other payments, Multiple job-holding in the arts, Demand for artists' labour, The demand for superstars, Training in the arts

#### *Readings:*

Ruth Towse, *A Textbook of Cultural Economics*. Cambridge University Press. 2010.

## **DISCIPLINE SPECIFIC ELECTIVE (DSE) PAPERS: GROUP-II**

### **(i) POLITICAL ECONOMY-II (BECD2f)**

#### **Course Description**

Employing perspectives from alternative schools of thought, this course explores the development of the structure and institutions of capitalist economies and their relationship to social and political forces. Students are expected to read some classic texts as well as more recent commentaries.

#### **Course learning outcome**

1. They will learn the structure and institutions of capitalist economies and their relationship to social and political forces from different perspectives of alternative schools of thought.
2. They would be exposed to recent commentaries as well as to some classical text in this field.

#### **Course Outline**

1. **The method of historical materialism**; the transition from feudalism to capitalism;
2. **Capitalism as a historical process** – alternative perspectives.

#### **3. Capitalism as an Evolving Economic System**

Basic features; accumulation and crisis; the modern corporation; monopoly capitalism—alternative perspectives.

#### **4. The State in Capitalism**

The state and the economy – contestation and mutual interdependence; the state as an arena of conflict; imperialism – the basic foundations.

#### *Readings:*

1. J. Gurley, "The Materialist Conception of History", Ch.2.1 in R. Edwards, M. Reich and T. Weisskopf (ed.), *The Capitalist System*, 2nd edition, 1978.
2. O. Lange, *Political Economy*, vol. 1, 1963, Chapters 1 and 2.
3. E.K. Hunt, *History of Economic Thought*, M.E. Sharpe, Indian edn, Shilpi Publications, 2004.
4. Irfan Habib, 1995, "Capitalism in History", *Social Scientist*, Vol. 23: 15-31.

5. R.L. Heilbroner, "Capitalism", in *The New Palgrave Dictionary of Modern Economics*, Macmillan, 1987. Also reprinted as Chapter 2 in *Behind the Veil of Economics* by R.L. Heilbroner, W.W. Norton, 1988.
6. P. Sweezy, *The Theory of Capitalist Development*, Monthly Review Press, 1942, chapters 2, 4, 5, 6, 8 and 10.
7. Anwar Shaikh, Entries on "Economic Crises" and "Falling Rate of Profit" in T. Bottomore et al (eds.), *The Dictionary of Marxist Thought*, OUP, Indian edition, Maya Blackwell, 2000.
8. Vamsi Vakulabharanam, 2009, The Recent Crisis in Global Capitalism: Towards a Marxian Understanding , *Economic and Political Weekly*, March 28, Vol. 44:144-150.
9. J. Schumpeter, *Capitalism, Socialism and Democracy*, George Allen and Unwin 1976, Chapters 6, 7 and 8.
10. P. Baran (1957), *The Political Economy of Growth*, Chapter 3, Pelican edition, 1973.
11. R. Heilbroner, The Role of the State , Ch.4 in *The Nature and Logic of Capitalism*, 1985.
12. M. Kalecki, Political Aspects of Full Employment , in E.K. Hunt and J.G. Schwarz (eds.), *A Critique of Economic Theory*, Penguin Books, 1972.
13. Amit Bhaduri, Nationalism and Economic Policy in the Era of Globalization , Ch. 2 in Deepak Nayyar (ed), *Governing Globalization: Issues and Institutions*, OUP, 2002 [also WIDER Working Paper no.188, WIDER website (2000)].
14. Prabhat Patnaik, "Lenin's Theory of Imperialism Today", in K.S. Jomo (ed.) *The Long Twentieth Century: The Great Divergence: Hegemony, Uneven Development and Global Inequality*, OUP.
15. James O'Connor, "The Meaning of Economic Imperialism," in Robert Rhodes, ed., *Imperialism and Underdevelopment*, New York: Monthly Review Press, 1970, pages 101 to 111.

## **(ii) COMPARATIVE ECONOMIC DEVELOPMENT (1850-1950) (BECD2g)**

### **Course Description**

This course investigates selected issues in comparative historical perspective over the 19th century and the first few decades of the 20th century. The course focuses on a set of countries, which followed clearly diverse trajectories and patterns of growth to achieve their industrial transition and compares the outcomes of these diverse trajectories on sectoral change, inter-sectoral relations, labour processes and industrial relations and also compares the role of the state in facilitating the respective trajectories.

### **Course learning outcome**

1. The students would have learned the economic systems followed by these selected countries namely US, USSR, UK and Japan.
2. They would have learned about the different trajectories and patterns of growth experienced by these diverse forms of economic systems and their outcomes on sectoral change, intersectoral relations, labour processes and industrial relations.
3. They would also have learned about the role of the State in facilitating the respective trajectories.

### **Course Outline**

#### **1. Introduction and Perspectives on Comparative Economic Development**

2. **An Overview of Economic Development of the countries** namely US, USSR, UK and Japan which have been selected for case studies

#### **3. Agriculture**

Agrarian surplus and the role of the peasantry in economic development.

#### **4. Industry**

The industrial revolution in Britain; Industrialisation in late industrialisers.

#### **5. The Factory System and Making of the Industrial Working Class**

Division of labour, structure of industrial authority, organisation of work and industrial production, relationship between workers and managers.

#### **6. The Role of the State in Industrial and Developmental Transition**

#### *Readings:*

1. E.J. Hobsbawm, *World of Labour: Further studies in the history of labour*, London Weidenfeld & Nicholson, 1984.
2. E.J. Hobsbawm, *Industry and Empire: An Economic History of Britain since 1750*, Weidenfeld & Nicholson, 1968.
3. Peter Mathias, *The First Industrial Nation, An Economic History of Britain, 1700- 1914*. 2nd edition Methuen, 1983.
4. T. Nakamura, *Economic Growth in Pre-War Japan*, Tr. by Robert A Feldman, Yale University Press, 1983.
5. Okochi, Karsh and Levine, *Workers and Employees in Japan, The Japanese Employment Relations System*, University of Tokyo, 1965.
6. Y. Hayami, *A Century of Agricultural Growth in Pre-War Japan: Its Relevance to Asian Development*, University of Minnesota Press, 1975.
7. Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy 1925-1975*, Stanford University Press, 1982.

8. W.W. Lockwood, *Economic Development of Japan*, Expanded edition, Princeton University Press, 1966.
9. Dobb M., *Soviet Economic Development Since 1917*, Universal Book Stall, New Delhi, 1995.
10. Paul R. Gregory and Robert C. Stuart, *Soviet Economic Structure and Performance*, Harper & Row, 3rd edition, 1986.
11. Timothy W. Guinnane, 2002, Delegated Monitors, Large and Small: Germany 's banking System, 1800 –1914 , *Journal of Economic Literature*, Volume XL:73-124.
12. Richard A. Easterlin, Davis and Parker, *American Economic Growth: An economist's History of the United States*, Harper & Row, 1972.
13. Hughes and Cain, *American Economic History*, HarperCollins College Publishers, 4<sup>th</sup> edition, 1994.

Background readings for teachers:

Angus Maddison, *Dynamic Forces in Capitalist Development, A Long-Run Comparative View*, Oxford University Press, 1991.

P.K.O'Brien, 1986, Do we have a Typology for the Study of European Industrialization in the XIXth Century? , *Journal of European Economic History*, XV 3:291-333.

### **(iii) FINANCIAL ECONOMICS (BECD2h)**

#### **Course Description**

This course introduces students to the economics of finance. Some of the basic models used to benchmark valuation of assets and derivatives are studied in detail; these include the CAPM, and the Binomial Option Pricing models. The course ends with a brief introduction to corporate finance.

#### **Course learning outcome**

1. The students will learn the basic concepts associated with the economics of finance.
2. They will also learn about the benchmark valuation of assets and derivatives through CAPM model, Binomial Option pricing model etc.
3. They will also pick up the basic concepts in corporate finance.

#### **Course Outline**

##### **1. Investment Theory**

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.



## **2. Portfolio Analysis**

### **a. 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.

### **b. 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.

## **3. Options and Derivatives**

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.

## **4. Corporate Finance**

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.

### *Readings:*

1. David G. Luenberger, *Investment Science*, Oxford University Press, USA, 1997.
2. Hull, John C., *Options, Futures and Other Derivatives*, Pearson Education, 6<sup>th</sup> edition, 2005.
3. Thomas E. Copeland, J. Fred Weston and Kuldeep Shastri, *Financial Theory and Corporate Policy*, Prentice Hall, 4th edition, 2003.
4. Richard A. Brealey and Stewart C. Myers, *Principles of Corporate Finance*, McGraw-Hill, 7th edition, 2002.
5. Stephen A. Ross, Randolph W. Westerfield and Bradford D. Jordan, *Fundamentals of Corporate Finance*. McGraw-Hill, 7th edition, 2005.
6. Burton G. Malkiel, *A Random Walk Down Wall Street*, W.W. Norton & Company, 2003.
7. William Sharpe, Gordon Alexander and Jeffery Bailey, *Investments*, Prentice Hall of India, 6th edition, 2003.

## **(iv) ECONOMICS OF HEALTH AND EDUCATION (BECD2i)**

### **Course Description**

The importance of education and health in improving well-being is reflected in their inclusion among the Millennium Development Goals adopted by the United Nations member states, which include among other goals, achieving universal primary education, reducing child mortality, improving maternal health and combating diseases. This course provides a microeconomic framework to analyze, among other things, individual choice in the demand for health and education, government intervention and aspects of inequity and discrimination in both sectors. It also gives an overview of health and education in India.

### **Course learning outcome**

1. The students will learn the demand aspect for health and education, government intervention, inequity and discrimination issue in these two sectors within the microeconomics framework.
2. They will also learn the importance of education and health in raising the well being of a society.

### **Course Outline**

#### **1. Role of Health and Education in Human Development**

Importance in poverty alleviation; health and education outcomes and their relationship with macroeconomic performance.

#### **2. Microeconomic Foundations of Health Economics**

Demand for health; uncertainty and health insurance market; alternative insurance mechanisms; market failure and rationale for public intervention; equity and inequality.

#### **3. Evaluation of Health Programs**

Costing, cost effectiveness and cost-benefit analysis; burden of disease.

#### **4. Health Sector in India: An Overview**

Health outcomes; health systems; health financing.

#### **5. Education: Investment in Human Capital**

Rate of return to education: private and social; quality of education; signaling or human capital; theories of discrimination; gender and caste discrimination in India.

#### **6. Education Sector in India: An Overview**

Literacy rates, school participation, school quality measures.

*Readings:*

1. William, Jack, *Principles of Health Economics for Developing Countries*, World Bank Institute Development Studies, 1999.
2. World Development Report, *Investing in Health*, The World Bank, 1993.
3. Ronald G., Ehrenberg and Robert S., Smith, *Modern Labor Economics: Theory and Public Policy*, Addison Wesley, 2005.

(v) Identity Economics (**BECD2f**)

**Course learning outcome**

1. The students will learn the salient features of identity economics.
2. They will also learn to analyze identity and norms in the utilitarian framework.
3. They will also study identity vis-à-vis economics of education.
4. The concept of gender and race is studied with nrespect to labour market, traditional economics of discrimination and identity theory.

**Unit 1.** Introduction to Identity Economics

Origins of Identity Economics, Ideas Have Consequences; Identity, Norms, and Utility Functions; Social Categories, Ideals, and Observation; Identity Economics and Supply and Demand

**Unit 2.** Identity and Norms in Utility

Short-Run and Long-Run Choices; The Role of Socialization; Structure and Choice of Identity; Models and Defining Identity; Individualistic Identity versus Interactionist Identity

**Unit 3.** Position of identity economics

Experiments and Identity Economics; Identity Economics, Gary Becker, and Tastes; Norms in Economics; Where Do Norms Come From?;

**Unit 4.** Identity and the Economics of Education

Identity in economic theory of education; An Identity Model of Students and Schools; Miracle Schools and School Reform; Private versus Public School; Race and Schooling; Identity Economics and the Demand and Supply of Education; Identity, School Goals, and School Choice

**Unit 5.** Gender and Race

Economics of Gender - An Identity Model of the Labor Market; Theory and Evidence; Identity Economics and New Conclusions; Gender, Labor Supply, and the Household; Economics of Race - Traditional Economics of Discrimination; Basis for an Identity Theory; Basis for an Identity Theory

### Readings:

George A. Akerlof and Rachel E. Kranton, *Identity Economics: How Our Identities Shape Our Work, Wages, And Well-Being*. Princeton University Press, 2010.

Nicholas Tarling and Edmund Terence Gomez (eds.), *The State, Development and Identity in Multi-Ethnic Societies: Ethnicity, equity and the nation*. Routledge Malaysian Studies Series, 2008.

### (vi) DISSERTATION (BECD803)

### Generic Elective in Economics

#### I: Introductory Microeconomics (BECG304)

#### 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 learning outcome

- 1 The students would have learned the basic principles of microeconomic theory, important terms and concepts used in microeconomics etc.
1. The working of the markets is explained in terms of demand and supply in the market. The concept of welfare is also dealt in the context of market operation.
2. The behavior of basic units in consumption and production respectively are explained in terms of key concepts in respective areas.
3. The students would have learned the market structures of a perfectly competitive and monopoly market via their equilibrium states and relevant government policies.

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

### **4. The Firm and Perfect Market Structure**

Behaviour of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run.

### **5. Imperfect Market Structure**

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

### **6. 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., 8<sup>th</sup> 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.

## **Generic Elective in Economics II: Introductory Macroeconomics (BECG404)**

### **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 learning outcome**

1. Students in this course will get familiarized with basic concepts of macroeconomics, its subject matter, its difference from microeconomics etc.
2. The students would have learned the basic concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.
3. The students would also have learned the basic structure of a classical and Keynesian system, how macroeconomic variables appear in them

### **Course Outline**

#### **1. Introduction to Macroeconomics and National Income Accounting**

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

#### **2. Money**

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

#### **3. Inflation**

Inflation and its social costs; hyperinflation.

#### **4. The Closed Economy in the Short Run**

Classical and Keynesian systems; simple Keynesian model of income determination; ISLM model; fiscal and monetary 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.

## **Generic Elective in Economics III(a): Indian Economy-I (BECG504a)**

### **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.

### **Course learning outcome**

1. The students will try to understand the development path of India since independence as paradigm shifts and turning points in the growth path of India.
2. The very important topic of growth and distribution will also be taught.
3. The students will also learn about the change in the structure of institutions responsible for planning and growth of the country.
4. The various aspects of economy of North eastern region of India including main economic activities of the region, natural resources will also be taught in this course.

### **Course Outline**

#### **1. Economic Development since Independence**

Major features of the economy at independence; growth and development under different policy regimes—goals, constraints, institutions and policy framework; an assessment of performance—sustainability and regional contrasts; structural change, savings and investment.

#### **2. Population and Human Development**

Demographic trends and issues; education; health and malnutrition.

#### **3. Growth and Distribution**

Trends and policies in poverty; inequality and unemployment.

#### **4. International Comparisons**

### *Readings:*

1. Jean Dreze and Amartya Sen, 2013. *An Uncertain Glory: India and its Contradictions*, Princeton University Press.

2. Pulapre Balakrishnan, 2007, The Recovery of India: Economic Growth in the Nehru Era, *Economic and Political Weekly*, November.
3. Rakesh Mohan, 2008, Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment, *Economic and Political Weekly*, May.
4. 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*.
5. Himanshu, 2010, Towards New Poverty Lines for India, *Economic and Political Weekly*, January.
6. Jean Dreze and Angus Deaton, 2009, Food and Nutrition in India: Facts and Interpretations, *Economic and Political Weekly*, February.
7. Himanshu. 2011, Employment Trends in India: A Re-examination, *Economic and Political Weekly*, September.
8. Rama Baru et al, 2010, Inequities in Access to Health Services in India: Caste, Class and Region, *Economic and Political Weekly*, September.
9. Geeta G. Kingdon, 2007, The Progress of School Education in India, *Oxford Review of Economic Policy*.
10. J.B.G. Tilak, 2007, Post Elementary Education, Poverty and Development in India, *International Journal of Educational Development*.
11. T. Dyson, 2008, India's Demographic Transition and its Consequences for Development in Uma Kapila, editor, *Indian Economy Since Independence*, 19<sup>th</sup> edition, Academic Foundation.
12. Kaushik Basu, 2009, China and India: Idiosyncratic Paths to High Growth, *Economic and Political Weekly*, September.
13. K. James, 2008, Glorifying Malthus: Current Debate on Demographic Dividend in India, *Economic and Political Weekly*, June.
14. Reetika Khera, 2011, India's Public Distribution System: Utilisation and Impact *Journal of Development Studies*.
15. Aniruddha Krishna and Devendra Bajpai, 2011, Lineal Spread and Radial Dissipation: Experiencing Growth in Rural India, 1992-2005, *Economic and Political Weekly*, September.
16. Kaushik Basu and A. Maertens, eds, 2013, *Oxford Companion to Economics*, Oxford University Press.



## **Generic Elective in Economics III(b): Money and Banking (BECG504b)**

### **Course Description**

This course exposes students to the theory and functioning of the monetary and financial sectors of the economy. It highlights the organization, structure and role of financial markets and institutions. It also discusses interest rates, monetary management and instruments of monetary control. Financial and banking sector reforms and monetary policy with special reference to India are also covered.

### **Course learning outcome**

1. The students would have learned about the theory and functioning of the monetary and financial sectors of the economy.
2. Specifically, they would have learned the organization, structure and role of financial markets and institutions.
3. They will also learn concepts like interest rates, monetary management and instruments of monetary control.
4. Financial and banking sector reforms and monetary policy with special reference to India will also be taught.

### **Course Outline**

#### **1. Money**

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

#### **2. Financial Institutions, Markets, Instruments and Financial Innovations**

a. Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises.

b. Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations.

#### **3. Interest Rates**

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

#### **4. Banking System**

a. Balance sheet and portfolio management.

b. Indian banking system: Changing role and structure; banking sector reforms.

#### **5. Central Banking and Monetary Policy**

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

### **Readings:**

1. F. S. Mishkin and S. G. Eakins, *Financial Markets and Institutions*, Pearson Education, 6<sup>th</sup> edition, 2009.
2. F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, *Foundations of Financial Markets and Institutions*, Pearson Education, 3rd edition, 2009.
3. L. M. Bhole and J. Mahukud, *Financial Institutions and Markets*, Tata McGraw Hill, 5<sup>th</sup> edition, 2011.
4. M. Y. Khan, *Indian Financial System*, Tata McGraw Hill, 7th edition, 2011.
5. Various latest issues of R.B.I. Bulletins, Annual Reports, Reports on Currency and Finance and Reports of the Working Group, IMF Staff Papers.

### **Generic Elective in Economics IV(a): Indian Economy-II (BECG604a)**

#### **Course Description**

This course examines sector-specific policies and their impact in shaping trends in key economic indicators in India. It highlights major policy debates and evaluates the Indian empirical evidence.

#### **Course learning outcome**

1. The students will learn how the Indian economy was doing sector-wise, the shaping trends giving push to the overall growth to the economy.
2. The students will also get acquainted with the kind of policy debates in regard to sectoral push, their impact on people as well as on economic key indicators in India.
3. The students would also get a measure of performance of economy via empirical evidence.

#### **Course Outline**

##### **1. Macroeconomic Policies and Their Impact**

Fiscal Policy; trade and investment policy; financial and monetary policies; labour regulation.

##### **2. Policies and Performance in Agriculture**

Growth; productivity; agrarian structure and technology; capital formation; trade; pricing and procurement.

##### **3. Policies and Performance in Industry**

Growth; productivity; diversification; small scale industries; public sector; competition policy; foreign investment.

#### 4. Trends and Performance in Services

##### *Readings:*

1. 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.
2. 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.
3. Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, Agricultural Growth in India Since 1991, *RBI DEAP Study no. 27*.
6. Kunal Sen, 2010, Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, *The Rise of Asia*, Routledge.
7. 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.
8. Dipak Mazumdar and Sandeep Sarkar, 2009, The Employment Problem in India and the Phenomenon of the Missing Middle, *Indian Journal of Labour Economics*.
9. J. Dennis Rajakumar, 2011, Size and Growth of Private Corporate Sector in Indian Manufacturing, *Economic and Political Weekly*, April.
10. Ramesh Chand, 2010, Understanding the Nature and Causes of Food Inflation, *Economic and Political Weekly*, February.
11. Bishwanath Goldar, 2011, Organised Manufacturing Employment: Continuing the Debate, *Economic and Political Weekly*, April.
12. Kaushik Basu and A. Maertens, eds, 2013. *The New Oxford Companion to Economics in India*, Oxford University Press.

#### **Generic Elective in Economics IV(b):**

#### **Economic History of India 1857-1947 (BECG604b)**

##### **Course Description**

This course analyses key aspects of Indian economic development during the second half of British colonial rule. In doing so, it investigates the place of the Indian economy in the wider colonial context, and the mechanisms that linked economic development in India to the

compulsions of colonial rule. This course links directly to the course on India 's economic development after independence in 1947.

### **Course learning outcome**

1. They will learn the key aspects of Indian economic development during the second half of British colonial rule.
2. They will learn how the structure of the Indian economy was linked to the compulsions of colonial rule.

### **Course Outline**

#### **1. Introduction: Colonial India: Background and Introduction**

Overview of colonial economy.

#### **2. Macro Trends**

National Income; population; occupational structure.

#### **3. Agriculture**

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

#### **4. Railways and Industry**

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**

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.

#### *Readings:*

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. J. Krishnamurty, *Occupational Structure*, Dharma Kumar (editor), The Cambridge Economic History of India, Vol. II, (henceforth referred to as CEHI), 2005, Chapter 6.
5. Irfan Habib, *Indian Economy 1858-1914*, A People’s History of India, Vol.28, Tulika, 2006.

6. Ira Klein, 1984, When Rains Fail: Famine relief and mortality in British India , *IESHR* 21.
7. Jean Dreze, *Famine Prevention in India in Dreze and Sen (eds.) Political Economy of Hunger*, WIDER Studies in Development Economics, 1990, pp.13- 35.
8. John Hurd, *Railways*, CEHI, Chapter 8, pp.737-761.
9. Rajat Ray (ed.), *Entrepreneurship and Industry in India*, 1994.
10. AK Bagchi, Deindustrialization in India in the nineteenth century: Some theoretical implications , *Journal of Development Studies*, 1976.
11. MD Morris, *Emergence of an Industrial Labour Force in India*, OUP 1965, Chapter 11, Summary and Conclusions.
12. K.N. Chaudhuri, *Foreign Trade and Balance of Payments*, CEHI, Chapter 10.
13. B.R. Tomlison, 1975, *India and the British Empire 1880-1935*, IESHR, Vol.XII.
14. Dharma Kumar, *The Fiscal System*, CEHI, Chapter 12.
15. Basudev Chatterjee, *Trade, Tariffs and Empire*, OUP 1992, Epilogue. Background reading for students: Irfan Habib, *Indian Economy 1858-1914 (A People's History of India)*, Vol.28, Tulika 2006. Daniel Thorner, *Agrarian Prospect in India*, 1977.

### **Generic Elective in Economics (v): Environmental Economics (BECG704)**

#### **Course Description**

This course introduces students to concepts, methods and policy options in managing the environment using tools of economic analysis. This course should be accessible to anyone with an analytical mind and familiarity with basic concepts of economics. Since several environmental problems are caused by economic activity (for instance, carbon emissions, overharvesting of renewable resources and air and water pollution as a by-product of industrial activity), this course examines different approaches to adjusting behaviour through economic institutions such as markets and incentives as well as through regulation, etc. It also addresses the economic implications of environmental policies through practical applications of methods for valuation of environmental goods and services and quantification of environmental damages. Conversely, the impact of economic growth on the environment is also addressed under the rubric of sustainable development. Environmental problems and issues from the Indian and international context (especially global warming) are used to illustrate the concepts and methods presented in the course. The course will be useful for students aiming towards careers in the government sector, policy analysis, business, journalism and international organisations.

### **Course learning outcome**

1. The students will learn the linkage of the current environmental problems of the world with economic factors.
2. The students will learn the application of economic principles to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies.
3. The students will also get familiarized with economic implications of environment policies.
4. Concepts like valuation of environmental quality, quantification of environmental damages, inclusive cost-benefit analysis of projects, environmental impact analysis will also be taught

### **Course Outline**

#### **1. Introduction**

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

#### **2. The Design and Implementation of Environmental Policy**

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

#### **3. Environmental Valuation Methods and Applications**

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

#### **4. Sustainable Development**

Concepts; measurement; perspectives from Indian experience

#### *Readings:*

1. Roger Perman, Yue Ma, Michael Common, David Maddison and James McGilvray, "*Natural Resource and Environmental Economics*", Pearson Education/Addison Wesley, 4th edition, 2011.
2. Charles Kolstad, "*Intermediate Environmental Economics*", Oxford University Press, 2<sup>nd</sup> edition, 2010.
3. Robert N. Stavins (ed.), "*Economics of the Environment: Selected Readings*", W.W. Norton, 6th edition, 2012.

4. Robert Solow, “An Almost Practical Step toward Sustainability,” Resources for the Future 40th anniversary lecture, 1992.
5. Kenneth Arrow et al., “Are We Consuming Too Much?” *Journal of Economic Perspectives*, 18(3): 147-172, 2004.
6. IPCC (Intergovernmental Panel on Climate Change), Fifth Assessment Report (forthcoming 2014).

## **Generic Elective in Economics (vi): Public Finance (BECG804)**

### **Course Description**

This course is a non-technical overview of government finances with special reference to India. The course does not require any prior knowledge of economics. It will look into the efficiency and equity aspects of taxation of the centre, states and the local governments and the issues of fiscal federalism and decentralisation in India. The course will be useful for students aiming towards careers in the government sector, policy analysis, business and journalism.

### **Course learning outcome**

1. The students would have learned the nature of government fiscal intervention and its implications for allocation, distribution and stabilization.
2. Specifically, they will learn about the government taxation and expenditure.
3. They will learn about other topics as well including public goods, market failures and externalities

### **Course Outline**

#### **Unit 1 Role of government**

Meaning and scope of Public Finance – Functions of the State - Comparison of Public and Private Finance – Basic theories of Public Finance: Classical and Keynesian - Principle of Maximum Social Advantage - Limitations of the Principle

#### **Unit 2 Public Expenditure**

Wagner’s law, Peacock - Wiseman hypothesis; Effects of public expenditure on production, distribution, stability and economic growth; cost benefit analysis

#### **Unit 3 Taxation**

Theories of taxation: Objectives, Classification and Canons of taxation – Features of a good tax system – Effects of taxation of production and distribution - Taxable Capacity; dead weight loss and distortion, efficiency and equity considerations, tax incidence; VAT and GST

#### **Unit 4 Budget**

Revenue account, capital account, deficits; economic and functional classification of budget; fiscal policy in underdeveloped countries

## Unit 5

Fiscal federalism in India: history and structure, Finance Commission

### Readings:

1. Bhatia, H.L. (2004). *Public finance*, Vikas Publications, New Delhi.
2. Cullis, J., Jones, P. (1998). *Public finance and public choice*, 2nd ed. Oxford University Press.
3. Das, S. (2017). Some concepts regarding the goods and services tax. *Economic and Political Weekly*, 52(9).
4. Hindriks, J., Myles, G. (2013). *Intermediate public economics*, 2nd ed. MIT Press.
5. Musgrave, R.A. and Musgrave, P.B. (1989). *Public Finance in theory and practice*. Singapore: McGraw Hills.
6. Stiglitz, J. (2009). *Economics of the public sector*, 3rd ed. W. W. Norton.
7. Alam, S. (2016). GST and the states: sharing tax administrations. *Economic and Political Weekly*, 51(31).

## Ability Enhancement Compulsory Courses (AECC) Credit: 4

### 1. AECC-Ia: COMMUNICATIVE ENGLISH SKILLS (BECA101a)

#### Course objectives

The objective of this course is to improve the communicative skills of the students in English. The basic skills for learning a language: Listening, Speaking and Writing will be discussed to improve the learners' communicative skill. The importance of English in today's world of globalization is well known. So, fluency and proficiency in this language is a must. In order to make the learners skilled in this language, they will be taught phonetics and phonology. They will learn the speech mechanisms and know the difference in vowel as well consonant sounds in English from their mother tongue. They will be taught how to improve their pronunciation by introducing word stress/accents rules and practice on it. They will learn grammatical errors which are generally committed by Second Language Learners of English. The learners will have to practice communication in English through group discussion, extempore and role play.

#### Course learning outcome

- Learners will be able to improve communicative skills in English.
- Learners will learn how to pronounce the English sounds which are different from their mother tongue.



- Learners will know the common errors in English and hence, they will write with grammatical accuracy.
- During conversation in English, the learners will know when to take turns, change their role and modulate the pitch.
- Learners will be aware of the basic language skills and ways to improve these skills.
- After practice in Language Use through group discussion, extempore and role play, the learners will have confidence to speak in English fluently and with proper pronunciation.

## Course Content

### 1. Communication:

Verbal and Non-Verbal Communication, Purpose for Communication, Barriers to Communication, Steps for Effective Communication: English as an International Language, Varieties of English, Common Errors in English.

### 2. English Language Skills:

Listening Skill, Listening and Hearing, Types of listeners, Listening Skill Activities; Speaking Skill, Context of Speaking, Qualities of a Good Speaker, Stress, Rhythm and Intonation; Writing Skill, Types of Writing, Process and Stages of Writing, Qualities of a Good Writer.

### 3. Phonology and Phonetics:

Phoneme, Phone and Allophone, Vowels, Consonants, Diphthongs, Word Stress.

### 4. Basic Sentences in English:

Clause and Phrases, Verbs, Voice and Narration.

### 5. Practice in Language Use:

Group discussion, Extempore and Role play.

## Suggested Reading

1. A.C. Gimson (1980). *An Introduction to the Pronunciation in English*.
2. C.F. Hockett (1963). *A Course in Modern Linguistics*.
3. H.D. Brown (1980). *Principles of Language Learning and Teaching*.
4. J.D.O'Connor (1973). *Better English Pronunciation*.
5. John Lyons (1981). *Language and Linguistics: An Introduction to Linguistics*.
6. Victoria Fromkin and Robert Rodman (1978). *An Introduction to Language*.
7. M.L. Tickoo (2003). *Teaching and Learning English: A Source book for Teachers and Teacher-trainers*.

**Or**

## **2. AECC 1b: COMMUNICATION SKILLS (BECA101b)**

### **COURSE DESCRIPTION:**

Communication skills is one of the important part of general skills that are essential among the university students. This course is an introduction to basics of communication and communication skills. Emphasis is given on basic concepts of communication, techniques used in listening, interpersonal communication, small group communication, public speaking, presentation and interview.

### **OBJECTIVE:**

To enhance the communication skills of the students.

### **Course learning outcome**

#### **UNIT 1:**

Communication- Definition, elements, process and functions, types of communication, verbal and non-verbal communication, 7C's of communication and barriers to communication.

#### **UNIT 2:**

Communication Skills-Listening : Types of listening, listening skills, barriers of effective listening, Small group communication technique, Public speaking techniques, Meetings: Convening, presentation, managing post meeting follow ups, organizing Meeting manners, Presiding over a meeting and participating in a meeting.

#### **UNIT 3:**

Presentation Skills- Pre presentation preparation, Presentation Skills, Post presentation follow up, Presentation aids-audio aids, visual aids, audio-visual aids, printed aids and computer aided presentation.

#### **UNIT 4:**

Interviews- kinds of interview, importance of job Interview, characteristics of job Interview, interview process, interview manners and etiquettes, common questions during interview and dress codes.

*Readings:*

Aggarwal Virbala, Gupta V.S., Handbook of Mass communication & Journalism , Concept publishing company.

John Adair, Effective Communication: The Most Important Management Skill of All , Pan Macmillan

Rizvi, M Ashraf. (2005). Effective Technical Communication, Tata McGraw- Hill Publishing Company Ltd., New Delhi.

Keval J Kumar, (2012), Mass Communication in India, Jaico Publishing, Mumbai

Michael Norton and PurbaDutt, (2003), Getting started in Communication, Sage Publications.

Anderson, Kenneth, (1972), Introduction to Communication: Theory and Practice. Cummings Publishing Co., California.

Berlo David, Rinehart & Winston, (1960), The process of communication. Holt, NY.\

De Sola Pool, (1972), Handbook on Communication, Ithiel , Rand McNally College Publishing Co, Chicago

Moss Tubbs, (2002), Human Communication Principles and Context, Tata McGraw- Hill Publishing Company Ltd., New Delhi.

Joseph A Devit, (1999), Massages Building Interpersonal Communication Skills, Longman, Inc, New York.

**AECC 2: Environmental Studies (BECA201)**

**The Vision:**

The importance of environmental science and environmental studies cannot be disputed. The need for sustainable development is a key to the future of mankind. Continuing problems of pollution, loss of forest, solid waste disposal, degradation of environment, issues like economic productivity and national security, Global warming, the depletion of ozone layer and loss of biodiversity have made everyone aware of environmental issues. The United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 and world Summit on Sustainable Development at Johannesburg in 2002 have drawn the attention of people around the globe to the deteriorating condition of our environment. It is clear that no citizen of the earth can afford to be ignorant of environment issues. Environmental management has captured the attention of health care managers. Managing environmental

hazards has become very important. Human beings have been interested in ecology since the beginning of civilization. Even our ancient scriptures have emphasized about practices and values of environmental conservation. It is now even more critical than ever before for mankind as a whole to have a clear understanding of environmental concerns and to follow sustainable development practices. India is rich in biodiversity which provides various resources for people. It is also basis for biotechnology. Only about 1.7 million living organisms have been described and named globally. Still many more remain to be identified and described. Attempts are made to conserve them in ex-situ and in-situ situations. Intellectual property rights (IPRs) have become important in a biodiversity-rich country like India to protect microbes, plants and animals that have useful genetic properties. Destruction of habitats, over-use of energy resource and environmental pollution have been found to be responsible for the loss of a large number of life-forms. It is feared that a large proportion of life on earth may get wiped out in the near future. In spite of the deteriorating status of the environment, study of environment has so far not received adequate attention in our academic programmes. Recognizing this, the Hon'ble Supreme Court directed the UGC to introduce a basic course on environment at every level in college education. Accordingly, the matter was considered by UGC and it was decided that a six months compulsory core module course in environmental studies may be prepared and compulsorily implemented in all the University/Colleges of India. The experts committee appointed by the UGC has looked into all the pertinent questions, issues and other relevant matters. This was followed by framing of the core module syllabus for environmental studies for undergraduate courses of all branches of Higher Education. We are deeply conscious that there are bound to be gaps between the ideal and real. Genuine endeavour is required to minimize the gaps by intellectual and material inputs. The success of this course will depend on the initiative and drive of the teachers and the receptive students.

### **Course learning outcome**

### **Course learning outcome**

## **SYLLABUS**

### **Unit 1: Multidisciplinary nature of environmental studies**

Definition, scope and importance; Need for public awareness.

### **Unit 2: Natural Resources**

Renewable and non-renewable resources: Natural resources and associated problems. a) Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people. b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies. d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Case studies. f) Land resources: Land as a

resource, land degradation, man induced landslides, soil erosion and desertification. • Role of an individual in conservation of natural resources. • Equitable use of resources for sustainable lifestyles.

### **Unit 3: Ecosystems**

Concept of an ecosystem. IV • Structure and function of an ecosystem. • Producers, consumers and decomposers. • Energy flow in the ecosystem. • Ecological succession. • Food chains, food webs and ecological pyramids. • Introduction, types, characteristic features, structure and function of the following ecosystem: - a. Forest ecosystem b. Grassland ecosystem c. Desert ecosystem d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) (6 lectures)

### **Unit 4: Biodiversity and its conservation**

Introduction – Definition: genetic, species and ecosystem diversity. • Biogeographical classification of India • Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values • Biodiversity at global, National and local levels. • India as a mega-diversity nation V • Hot-spots of biodiversity. • Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts. • Endangered and endemic species of India • Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

### **Unit 5: Environmental Pollution**

Definition • Cause, effects and control measures of:- a. Air pollution b. Water pollution c. Soil pollution d. Marine pollution e. Noise pollution f. Thermal pollution g. Nuclear hazards • Solid waste Management : Causes, effects and control measures of urban and industrial wastes. • Role of an individual in prevention of pollution. • Pollution case studies. • Disaster management: floods, earthquake, cyclone and landslides. (

### **Unit 6: Social Issues and the Environment**

From Unsustainable to Sustainable development • Urban problems related to energy • Water conservation, rain water harvesting, watershed management • Resettlement and rehabilitation of people; its problems and concerns. Case Studies • Environmental ethics: Issues and possible solutions. • Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies. • Wasteland reclamation. • Consumerism and waste products. • Environment Protection Act. • Air (Prevention and Control of Pollution) Act. • Water (Prevention and control of Pollution) Act • Wildlife Protection Act • Forest Conservation Act • Issues involved in enforcement of environmental legislation. • Public awareness.

#### *Readings:*

- a) Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.
- b) Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad – 380 013, India, Email:mapin@icenet.net (R)
- c) Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p
- d) Clark R.S., Marine Pollution, Clanderson Press Oxford (TB)

- e) Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumabai, 1196p
- f) De A.K., Environmental Chemistry, Wiley Eastern Ltd.
- g) Down to Earth, Centre for Science and Environment (R)
- h) Gleick, H.P. 1993. Water in crisis, Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute Oxford Univ. Press. 473p
- i) Hawkins R.E., Encyclopedia of Indian Natural History, Bombay Natural History Society, Bombay (R)
- j) Heywood, V.H & Waston, R.T. 1995. Global Biodiversity Assessment. Cambridge Univ. Press 1140p.
- k) Jadhav, H & Bhosale, V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284 p.
- l) Mckinney, M.L. & School, R.M. 1996. Environmental Science systems & Solutions, Web enhanced edition. 639p.
- m) Mhaskar A.K., Matter Hazardous, Techno-Science Publication (TB)
- n) Miller T.G. Jr. Environmental Science, Wadsworth Publishing Co. (TB)
- o) Odum, E.P. 1971. Fundamentals of Ecology. W.B. Saunders Co. USA, 574p
- p) Rao M N. & Datta, A.K. 1987. Waste Water treatment. Oxford & IBH Publ. Co. Pvt. Ltd. 345p.
- q) Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut
- r) Survey of the Environment, The Hindu (M)
- s) Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science (TB)

## **Skill Enhancement Elective Courses (SEC) Credit: 4**

### **1. SEC-1: Data Analysis (BECS102)**

#### **Course Objective**

This is a skill enhancement course for data analysis. The students will be given hands on training on using statistical and computing software to better visualize and understand data concepts. The course is designed to be delivered through 2 classroom lectures and 4 computer lab classes per week.

#### **Course Learning Outcomes**

The course will use data simulations and publicly available data sources to help students learn about data types, their organization and visual representation. They will learn how to compute summary statistics and do some basic statistical inference.

#### **Unit 1**

Introduction to the course: How can the representation and analysis of data help us study real-world problems. Publicly available data sets.

#### **Unit 2**

Using Data: Available statistical software, steps in data storage, organisation and cleaning

### **Unit 3**

Visualisation and Representation: Alternative forms of presenting summarising and presenting data

### **Unit 4**

Simple estimation techniques and tests for statistical inference

#### *Readings:*

1. Levine, D., Stephan, D., Szabat, K. (2017). *Statistics for managers using Microsoft Excel, 8th ed.* Pearson.

2. Tattar, P., Ramaiah, S., Manjunath, B. (2018). *A course in statistics with R.* Wiley.

#### **Teaching Learning Process**

Lectures and tutorials

#### **Assessment Methods**

Internal assessment and final examination as per CBCS rules

#### **Keywords**

Data representation, statistical software, estimation

## **2. SEC-2(a): Research Methodology (BECS202a)**

### **Course Objective**

The course begins with the formulation of a research problem and covers the issues concerning the generation of primary sample data. In this regard the designing of a questionnaire, the methods of design of a sample and its size, the modes of data collection from direct interview to online surveys, the appreciation of possible sources of errors, and the cleaning of data forms the bulk of the classroom instruction.

### **Course Learning Outcomes**

The course imparts skills to undertake data-based research. The student enrolling in this course would develop competency in executing sample surveys and would have reasonable exposure to a variety of secondary data sources.

#### **Unit 1**

Data types and sources: Qualitative and quantity data, measurement and scales; secondary sources of data and institutions

#### **Unit 2**

Sample questionnaires: Measurement and scales; questionnaires

#### **Unit 3**

Sample type and size: Simple random sampling; cluster sampling; stratified sampling and its complications; Determining an appropriate size

#### **Unit 4**

Errors in surveys: Misunderstanding of questions and answers; problem of nonresponse

#### **Unit 5**

Processing of survey data: Cleaning of data and its coding

#### **Unit 6**

Ethics and scientific integrity: Standards of conduct, privacy in data

*Readings:*

1. Bethlehem, J. (2009). *Applied survey methods: A statistical perspective*. Wiley.
2. Cochran, W. (2008). *Sampling techniques, 3rd ed.* Wiley.
3. Cooper, D., Schindler, P., Sharma, J. (2012). *Business research methods, 12th ed.* McGraw-Hill.
4. Flick, U. (2012). *Introducing research methodology: A beginner's guide to doing a research project*. Sage Publications.
5. Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., Tourangeau, R. (2009). *Survey Methodology*. Wiley.
6. Kumar, R. (2014). *Research methodology: A step by step guide for beginners, 4th ed.* Sage Publications.

### **3. SEC-2(b): Contemporary Economic Issues (BECS202b)**

#### **Course Objective**

The course seeks to familiarize students with basic concepts related to the Economic Survey and Union Budget. It aims to equip students with sufficient knowledge and skills to analyse these documents.

#### **Course Learning Outcomes**

Students will have the capability to understand government policies and will in general be informed participants in economic decision making.

#### **Unit 1**

##### **Concepts**

- Fiscal policy, areas of government spending in India
- Capital and revenue expenditure, plan and non-plan expenditures
- Deficits ( fiscal, primary, revenue), impact of fiscal deficits on the economy
- Capital receipts, revenue receipts, tax and non-tax revenue, direct and indirect taxes, need for rationalisation of tax structure, Goods and Services Tax (GST)
- Actual, revised and budget estimates
- Zero-base budgeting
- Gender budgeting
- Fiscal devolution and centre-state financial relations

#### **Unit 2**

##### **The economic survey**

- Analysis of current and past policy emphasis

#### **Unit 3**

##### **The union budget**

- Need for the budget, understanding the process of budget making in India
- Analysis of fiscal and revenue deficits
- Analysis of sources of revenue and expected growth in revenue, tax simplification, improvement in administration, expansion of tax net and other measures to improve revenue receipts,



- Analysis of expenditure pattern and expected growth in expenditure, thrust areas of budget, sectors that have received higher/lower shares of expenditure, the reasons and consequences thereof, steps proposed to ensure effective spending

*Readings:*

Given the nature of the course, the readings will be updated every year.

1. Centre for Budget and Governance Accountability. Recent reports.
2. Chakraborty, P. (2015). Intergovernmental fiscal transfers in India: Emerging trends and realities. In P. Patnaik (ed.): *Macroeconomics*. Oxford University Press.
3. Dasgupta, D., De, S. (2012). Fiscal deficit. In *The new Oxford companion to economics in India*. Oxford University Press.
4. Kapila, U. (2016). *Fiscal and budgetary developments in Indian economy since independence*. Academic Foundation.
5. Ministry of Finance. Economic and social classification of the budget.
6. Ministry of Finance. Economic survey (latest).
7. Ministry of Finance. Finance Commission report (latest).
8. Ministry of Finance. Union Budget.
9. Mukherjee, P. (2012). Budget making. In K. Basu, A. Maertens (eds.): *The new Oxford companion to economics in India*. Oxford University Press.
10. Mukherjee, S. (2015). Present state of goods and services tax (GST) reform in India. Working Paper No. 154. *National Institute of Public Finance and Policy*.
11. Reddy, Y. (2015). Continuity, change and the way forward: The fourteenth finance commission. *Economic and Political Weekly*, 50(21), 27-36.
12. Spiegel, M. (2003). *Theory and problems of probability and statistics*. Chapter 19. McGraw-Hill.