



॥ सा विद्या या विमुक्तये ॥

## स्वामी रामानंद तीर्थ मराठवाडा विद्यापीठ, नांदेड

“ज्ञानतीर्थ” परिसर, विष्णुपुरी, नांदेड - ४३१६०६ (महाराष्ट्र)

**SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY NANDED**

“Dnyanteerth”, Vishnupuri, Nanded - 431606 Maharashtra State (INDIA)

Established on 17th September 1994 – Recognized by the UGC U/s 2(f) and 12(B), NAAC Re-accredited with ‘A’ Grade

### ACADEMIC (1-BOARD OF STUDIES) SECTION

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प्रस्तुत विद्यापीठातील सामाजिकशास्त्रे संकुलातील मानवविज्ञान विद्याशाखेतील पदव्युत्तर स्तरावरील द्वितीय वर्षाचे CBCS Pattern नुसारचे अभ्यासक्रम शैक्षणिक वर्ष २०२०-२१ पासून लागू करण्याबाबत.

### परिपत्रक

या परिपत्रकान्वये सर्व संबंधितांना कळविण्यात येते की, प्रस्तुत विद्यापीठातील सामाजिक शास्त्रे संकुलामधील मानवविज्ञान विद्याशाखेतील पदव्युत्तर स्तरावरील द्वितीय वर्षाचा खालील विषयांचा C.B.C.S. (Choice Based Credit System) Pattern नुसारचा अभ्यासक्रम शैक्षणिक वर्ष २०२०-२१ पासून लागू करण्याच्या दृष्टिने मा.कुलगुरू महोदयांनी मा. विद्या परिषदेच्या मान्यतेच्या अधीन राहून मान्यता दिलेली आहे.

१) एम.ए.—द्वितीय वर्ष— अप्लाइड एकाॅनॉमिक्स

सदरील परिपत्रक व अभ्यासक्रम प्रस्तुत विद्यापीठाच्या [www.srtmun.ac.in](http://www.srtmun.ac.in) या संकेतस्थळावर उपलब्ध आहेत. तरी सदरील बाब ही सर्व संबंधितांच्या निदर्शनास आणून द्यावी.

‘ज्ञानतीर्थ’ परिसर,

विष्णुपुरी, नांदेड — ४३१ ६०६.

जा.क्र.: शैक्षणिक-१ / परिपत्रक / पदव्युत्तर(संकुल)—सीबीसीएस

अभ्यासक्रम / २०२०-२१ / ९१२

दिनांक : १५.०९.२०२०.

प्रत माहिती व पुढील कार्यवाहीस्तव :

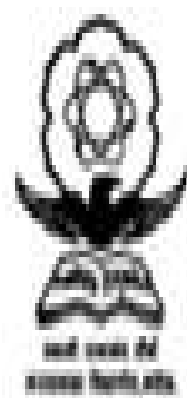
- १) मा. कुलसचिव यांचे कार्यालय, प्रस्तुत विद्यापीठ.
- २) मा. संचालक, परीक्षा व मूल्यमापन मंडळ यांचे कार्यालय, प्रस्तुत विद्यापीठ.
- ३) मा. संचालक, सर्व संबंधित संकुले, प्रस्तुत विद्यापीठ.
- ४) साहाय्यक कुलसचिव, पदव्युत्तर विभाग, प्रस्तुत विद्यापीठ.
- ५) उपकुलसचिव, पात्रता विभाग, प्रस्तुत विद्यापीठ.
- ६) सिस्टम एक्सपर्ट, शैक्षणिक विभाग, प्रस्तुत विद्यापीठ.

स्वाक्षरीत / —

**उपकुलसचिव**

शैक्षणिक (१-अभ्यासमंडळ) विभाग

# S.R.T.M. UNIVERSITY, NANDED.



M.A. (Applied Economics)  
New Syllabus for Semester- I II, III, IV  
Academic Year 2019-20  
Under **CBCS** Pattern

School of Social Sciences  
S.R.T.M. University, Nanded.

## **M.A. Applied Economics**

### **About the Programmers:**

School of Social Sciences of this University offered Choice Based Credit System in the PG Programme from June 2015. Applied Economics is one of the fulltime two years Post Graduate Programme of this school. This program has four semesters which get 80 credits at the end of this programme. Each Semester is with 20 credits. Each Course is for 4 credits and one credit is for 25 marks. First and Second Semester is divided in three Core Courses, One Discipline Specific Course and One Open Elective course. Third and Fourth Semester is divided in four Core Courses and One Discipline Specific Course. Core courses are the basic papers of the discipline of the applied economics program. Students have not choice to select the courses. According to the guidelines of Choice Based Credit System (CBCS) pattern, Students have to complete 70% credits from core course and 30 % from discipline and open electives. Students have to acquire 8 credits from Open Elective. It is mandatory to select one course from NPTEL/SWAYAM/MOOC, Inter School, Intra-School etc. in only first and second semester. Besides, student can increase their credits.

### **Eligibility and Fees**

Any graduate with Economics/ Statistics/Mathematics/ is eligible for seeking admission to the Programme. More details of admission procedure and fees structure can be seen from the prospectus of the University.

### **Scheme of Examination:**

Assessment of the Student is based on Internal Continuous Assessment (ICA) and External Continuous Assessment (ECA). Each Course has 50 marks for ICA and 50 marks for ECA. Written examination of Theory course is conducted at the end of the semester in External Continuous Assessment. Internal Continuous Assessment contains two tests of 15 marks and one Home assignment for 20 marks. Besides, teacher has choice to use any method of assessment of students like, seminar, group discussion, field work, practical etc instead of Home Assignment. All the Rules of Passing, Grace Marks, A.T.K.T and of CBCS System of the University are applicable to this Course.

### **Objectives of the Programme:**

In keeping with the reforms in the economic system and the market structure, this Programme\ provides in depth knowledge in the subject matter of economics. Not only understanding of theories and principles of economics but also to apply the principles and theories of economics in practical situations. This is useful in today's globalised economic environment. Similarly, there is importance for industry-academic interaction. Applied Economics Programme makes much of all students to learn in detail crucial concepts, current national and international events, policy of

government, budget, tools and techniques of econometrics for forecasting. Thus, whatever contents are taught by us, on that basis, students are given to an assignment practically in society through field work, mini project, case studies etc. In this regard, some of the subjects having huge demand in job market like banking and finance, foreign trade and international finance, computer application in economic analysis with practical training, statistical, mathematical and econometrical tools, stock market transactions, taxation. This course uses to student for planning and schedule of various works or projects, making efficient use of computers in data analysis and also use of internet to manipulate text and data, review of literature.

### **Outcome of the Programme:**

After completing this programme, student will be able to solve economic issue with the help of statistical and mathematical techniques and will be capable to understand economic concept in a simple way. They may join as officer in planning and economic field because the courses which provides deep knowledge about methodology and policy implication. They will be become as consultant for handling data feeding, coding and interpretation of various institutions. The courses of Statistical, mathematical and econometric provide foresting information about the commodity. In this connection, more opportunities are available of students who are available of content knowledge with application through econometric software. Apart that, revising the content of the course, latest modern teaching aid and techniques like, LCD projectors and ICT enabled active board are used for imparting the knowledge to student. These include innovative methods like small group seminars which would encourage the students to prepare a paper by themselves and communicate their ideas by presenting the same before the audience.

## Program Structure

CBCS First Semester							
S N	Course Code	Level of Paper	Number of Credits	Marks/25 per credit	ICA	ECA	Grand Total
1	AEC-CC- 101	Micro Economics	04	100	50	50	100
2	AEC-CC- 102	Basic Econometrics	04	100	50	50	100
3	AEC-CC- 103	Statistical Methods	04	100	50	50	100
4	AEC-DE-104	( any one)					
		A)Agricultural Economics	04	100	50	50	100
		B)Money and Banking	04	100	50	50	100
		C)Labour Economics	04	100	50	50	100
5	AEC-OE-105	(any one)					
		A)NPTEL/SWAYAM/ MOOC	04	100	50	50	100
		B) Inter School	04	100	50	50	100
		C) Intra School	04	100	50	50	100
		Total Credits	20	500	250	250	500

CBCS Second Semester							
S. N	Course Code	Level of Paper	Number of Credits	Marks/ 25 per credit	ICA	ECA	Grand Total
1	AEC-CC-201	Macro Economics	04	100	50	50	100
2	AEC-CC-202	Methodology of Economic Research	04	100	50	50	100
3	AEC-CC-203	International Trade Theory and Policy	04	100	50	50	100
4	AEC-DE-204	( any one)					
		A)Indian Economy	04	100	50	50	100
		B)Political Economy	04	100	50	50	100
		C)Industrial Economy	04	100	50	50	100
6	AEC-OE-205	(any one)	04	100	50	50	100
		A) NPTEL/SWAYAM/ MOOC	04	100	50	50	100
		B) Inter School	04	100	50	50	100
		C) Intra School	04	100	50	50	100
		Total Credits	20	500	250	250	500

CBCS Third Semester							
Sr.No	Course Code	Level of Paper	Number of Credits	Marks/25 per credit	ICA	ECA	Grand Total
1	AEC-CC- 301	Public Economics	04	100	50	50	100
2	AEC-CC-302	Mathematical Economics	04	100	50	50	100
3	AEC-CC-303	Advanced Econometrics	04	100	50	50	100
4	AEC-CC-304	Practical-I Computer Application for Statistical Analysis and Visualization.	04	100	50	50	100
5	AEC-DE-305	( any one)					
		A)Demography	04	100	50	50	100
		B)India's Foreign Trade	04	100	50	50	100
	Total Credits		20	500	250	250	500

CBCS Fourth Semester							
Sr.No	Course Code	Level of Paper	Number of Credits	Marks/25 per credit	ICA	ECA	Grand Total
1	AEC-CC- 401	International Macroeconomics	04	100	50	50	100
2	AEC-CC-402	Research Dissertation	04	100	50	50	100
3	AEC-CC-403	Indian Public Economics	04	100	50	50	100
4	AEC-CC-404	Practical-II Computer application for Mathematical Economics and Econometrics	04	100	50	50	100
5	AEC-DE-405	( any one)					
		A) Financial Institutions and Market	04	100	50	50	100
		B) Gender Economics	04	100	50	50	100
	Total Credits		20	500	250	250	500

**AEC = This refers to Applied Economics**

**Core Courses (CC):** The Core Courses are Compulsory for each semester. Each core course is for four credits i.e. for 100 marks.

**Discipline Specific Electives (DE):** Student will have to choose any one course from the list of respective DE for each semester (Semester I, II, III and IV)

**Open Elective (OE)** Students will have to choose any one course from the group of open elective in semester I and II.

**ICA = Internal Continuous Assessment.**

**ECA = External Continuous Assessment.**

**Note:**

1. Every student will have to opt 05 courses per semester, i.e. 20 credits per semester. (80 credits in total programme).
2. In semester I and II more choices are offered to students in the form of DE and OE, and in semester III and IV only in the form of DE.
3. There will be Internal Continuous Assessment (**ICA**) for 50 marks out of 100.
4. As the programme is Applied in nature students will have to complete application oriented Internal Home Assignments of 20 marks in each semester from ICA.
5. Apart from this in semester III and IV, as a part of Applied Economics students will have to complete their practical work (Skill Enhancement Course).

**Third Semester**  
**AEC-CC-301**  
**Public Economics**

**Learning Objective:**

This paper helps to familiarize the students with role and importance of public economics in the context of economics welfare. This paper help students to know the all basic concept of public economics like public expenditure ,public revenue ,public debt , fiscal policy ,budget etc. in detail with their different theories, principles ,classifications, structure, function ,canons and effect on different economic factor.

**Learning Outcomes:**

The Student will be able to understand the fundamental theories and principles of public economics, role of the government through fiscal policy and their effect on economics factor such as Production, Distribution, Employment, Economic growth, Development and Stabilization.

**Unit 1: Introduction of public economics:**

1.1 Concept and scope of public economics

1.2 Role of Government in economic activity –allocation, distribution, and stabilization function.

1.3 Private goods, Public goods and merit goods, Nature of demand and supply schedule of private goods and social goods.

1.4 Club good and common pool resources.

1.5 Principle of maximum social advantage, Externalities in the form of external cost and external benefit

1.6 Principle of opportunity cost in public sector.

**Unit 2: Public Expenditure and public Revenue.**

2.1 Theories of public expenditure, Wagner’s law of increasing state activities, Peacock Wiseman hypothesis,

2.2 Canon, and structure of public expenditure, Effect of public expenditure – Production, Income Distribution, Employment, Economic growth and Development, Role of public expenditure in under developed countries,

2.3 Meaning of public revenue, Different Sources of public revenue: Tax Revenue and non tax revenue.



### **Unit 3: Taxation and public debt:**

3.1 Meaning of taxation, Characteristics of good tax system,

3.2 Principles of taxation: principle of equity ,cost service theory , Benefit principle ,The Bowen and Lindahl models, Ability to pay theory : subjective and objective approach , Shifting and incidence of taxes,

3.3 Kinds of taxes : 1)Direct and Indirect tax 2)Progressive, Proportional ,Regressive and Digressive tax 3) Ad-valorem and Specific Tax 4)Single ,Double and Multiple tax, Effect of taxation : on Production ,Distribution .

3.4 Meaning of Public debt, Classification of public debt, Effect of public debt upon economy, Burden of public debt, public debt management.

### **Unit 4: Fiscal policy and budget:**

4.1 Fiscal policy, Objective of fiscal policy in developed and developing countries.

4.2 Role of fiscal policy in economic development, Fiscal policy for stabilization, interdependence of fiscal and monetary policies.

4.3 Kinds of Budgets, Zero base budgeting, Different concept of budget deficit, Balanced Budget Multiplier.

### **Suggested Readings:**

1. Richard A. Musgrave (1989), Public Finance in Theory and Practice McGraw Hill Book Company, New York.
2. Dr.Tyagi B.P., Public Finance, Jai Prakash Nath Pub.Meerat (UP).
3. Buchaman J.M. (1970), the Public Finances, Richard D.Irwin, Homewood.
4. Jha H. (1998), Modern Public Economics, Routledge, London.
5. Singh S.K. (1986) Public Finance in Developed and Developing Countries, S.Chand and Company Ltd, New Delhi.
6. R.K. Choudhury, Economics of public sector and public utility, Himalaya publication house, Bombay.
7. Public Finance, R.K. Lekhi, Kalyani Publication, New Delhi
8. Tripathy R.N. Public Finance in Underdeveloped Countries.
9. Alka Gupta, Public Finance & Tax planning, Anmol publication pvt.ltd, New Delhi.
10. Janak Raj Gupta, Public Economics in India: Theory & practices, Atlantic Publishers, New Delhi.
11. Surry M.M. ,Finance Commission of India ,New Century ,2005.

# **AEC-CC-302**

## **Mathematical Economics**

### **Learning Objectives:**

- 1) To learn the art of scientific, logical and critical applications of economic principles.
- 2) To understand to new tools and techniques in mathematical economics.
- 3) To focus on practical problems as well as theoretical conceptual clarity.

### **Learning Outcomes:**

- 1) The student will learn how to build models by expressing words in symbols, numbers and equations.
- 2) They will discover techniques to solve decision-making process in economics.
- 3) They will learn how to use new techniques to solve personal, professional and social problems to take optimal decisions.

### **Unit 1. Basic Concepts**

1.1 Theory of Indices, Limit and Continuity, Variables, Constant and Parameters, Equations and Identities,

1.2 Number system, Concept of Sets and their Operations, Relations and Functions, Types of functions and application of functions in economic theory.

### **Unit 2. Differentiation**

2.1 Differentiation, Rules of Differentiation, Applications of Derivative in Economics, Elasticity of Demand, Price, MR, TR and Elasticity of demand in Perfectly Competitive Market.

2.2 Relationship between AR,MR, TR and demand elasticity under monopoly, Derivative used for evaluating MC, AC and AVC, Firm's equilibrium under Perfect Competition and Monopoly. Effects of Subsidy and Excise Duty on Monopoly Price, Output and Profit.

2.3 Techniques of Partial Derivatives: Functions of Two or More Variables, Applications of Partial Derivatives in Economics. Constrained Optimization: Use of Lagrange Multiplier Method

### **Unit 3 Matrix Algebra**

3.1 Concept of Matrix, Types of Matrices, Order of Matrix, Algebra of Matrix: Addition and Subtraction, Matrix and Scalar Multiplication, Properties of Transpose of a Matrix,

3.2 Determinants, Minors and Cofactors, Properties of Determinants, Inverse of Matrix, the method of Cramer's Rule, Matrix Algebra to Solve Input-output Models

## **Unit 4 Linear Programming and Integration**

4.1 Assumptions of Linear Programming, Graphical Solution to Linear Programming Problems, Simplex method.

4.2 The Process of Integration, Rules of Integration, Input Output Analysis and Game Theory.

4.3 Determining Consumer's and Producer's Surplus using Integration, Consumer's Surplus under Perfect Competition and Monopoly.

4.4 Gini Coefficient and Lorenz Curve for measuring Income Inequalities, Use of Integrals for finding Pareto Income Distribution.

### **Suggested Readings**

1. Allen, R.G.D. (2014). *Mathematical Analysis for Economists*, Trinity Press
2. Archibald, G. and Lipsey, R. (1977). *An Introduction to Mathematical Treatment of Economics*.
3. Boumal J. W. (2000). *Economic Theory and Operation Analysis*. Prentice Hall of India, Delhi
4. Chiang, A. C. (1984). *Fundamental Methods of Mathematical Economics*, MHE.
5. Dowling, E. T. (2012). *Introduction to Mathematical Economics*. McGraw-Hill.
6. Gura, E. and Maschler, M. (2008). *Insights into Game Theory: An Alternative Mathematical Experience*, Cambridge University Press
7. Hands, D. W. (2003). *Introductory Mathematical Economics*. Oxford University Press.
8. Henderson, J.M. and Quandt, R.E. (1980). *Microeconomic Theory: A Mathematical Approach*, McGraw Hill, New Delhi.
9. Hoy, M., Livernois, J., McKenna, C., Rees, R., and Stengos, T. (2011). *Mathematics for economics*. PHI.
10. Intriligator, M. D. (2002). *Mathematical Optimization and Economic Theory*. Society for Industrial and Applied Mathematics.
11. Miller, R. E., and Blair, P. D. (2009). *Input-Output Analysis: Foundations and Extensions*. Cambridge University Press.
12. Mukherji, Badal and Pandit, V. (1982). *Mathematical Methods for Economic Analysis*, Allied Publishers, Second edition.
13. Rasmusen, Eric (2006). *Games and Information: An Introduction to Game Theory*, 4th Edition, Wiley-Blackwell
14. Sydsaeter, K. and Hammond, P. (2002). *Mathematics for Economic Analysis*, Pearson Educational Asia, Delhi.
15. Varian, Hal R. (2010). *Intermediate Microeconomics: A Modern Approach*, Eighth edition, W. Norton.
16. Varian, Hall R (2019). *Microeconomic Analysis*, 3rd Edition, Viva Books.
17. Yamane, Taro (1975). *Mathematics for Economists*, Prentice Hall of India, New Delhi (1975).

## **AEC-CC- 303**

### **Advanced Econometrics**

**Learning Objective:** The objective of this course is to explore the advanced econometric methods like use of dummy variable for independent and response variable, dynamic econometric models and simultaneous equations. Apart from this one of the objectives is to introduce the student with multivariate analysis techniques.

**Learning Outcomes:** After completing this course students will be able to do regressions including qualitative variables. Students will also be able to understand the methods of solving dynamic econometric models and simultaneous equation model. Students will be able to choose an appropriate multivariate techniques for research purpose.

#### **Unit 1: Regression on Dummy Variables.**

1.1 Nature of Dummy Variables, Regression of Quantitative and Qualitative Variables,

1.2 Use of Dummy in Testing the Structural Stability, Comparing Two Regressions, Interaction Effect, Seasonal Analysis, Piecewise Linear Regression, Use of Dummy in Combining Time Series and Cross Section Data,

1.3 Technical Aspects of Dummy Variable Technique,

1.4 Exploration on the Dummy Dependent Variable- LPM, Logit, Probit, and Tobit Models.

1.5 Other aspects of dummy variable.

#### **Unit 2: Dynamic Econometric Models and Simultaneous-Equation Models.**

2.1 Role of time lag in Economics, Reasons for lag, Distributed Lag Model and Estimation, Koyck Approach to Distributed Lag Model.

2.2 Estimation of Autoregressive Model, The method of Instrumental Variable.

2.3 Autocorrelation in Autoregressive model, Almon Approach to Distributed Lag Model,

2.4 Causality in Economics.

2.5 Simultaneous Equation Model – Meaning, Nature, Consequences, Simultaneous equation bias and inconsistency of OLS estimates;

2.6 The Identification Problem- Rules of Identification – Order and Rank Conditions;

2.7 Methods of Simultaneous Equation- Reduced form, Instrumental Variable and 2SLS

### **Unit 3: Time Series Econometrics:**

3.1 Introduction to Time Series, Stationary Stochastic Process, Tests of Stationarity, Trend Stationarity and Difference Stationarity Stochastic Process.

3.2 Spurious Regression, Co integration- EG and AEG and CRDW Test, Co integration and Error Correction Mechanism.

3.3 Approaches to Economic Forecasting and Forecasting with ARIMA and VAR models.

3.4 Introduction to Panel data analysis techniques.

### **Unit 4 Introduction to Multivariate Analysis Techniques**

4.1 Multiple Regression Analysis

4.2 Discriminant Analysis

4.3 Multivariate Analysis of Variance (MANOVA)

4.4 Factor Analysis

4.5 Cluster Analysis

4.6 Canonical Correlation

4.7 Classification Analysis

4.8 Principal Component Analysis

#### **Suggested Readings:**

1) Gujarati, D. N. (1995), Basic Econometrics ( 2<sup>nd</sup> Edition), Mc Graw Hill, New Delhi.

2) Patterson, K, (2000), An Introduction to Applied Econometrics, Palgrave, New York.

3) Koutsoyiannis (1977), Theory of Econometrics ( 2<sup>nd</sup> edition ), The Macmillan Press Ltd., London.

4) Maddala, G. S. (1997), Econometrics, Mcgraw Hill, New York.

5) Intrilligator M. D. (1997), Econometric Methods, Techniques and Applications, Prentice Hall, Englewood Cliffs, New Jersey.

6) Johnston, J. (1991) Econometric methods, Mcgraw Hill book Co. London.

7) Chow G.C. (1983), Econometrics, Mcgraw Hill, New York.

- 8) Franses P. H. (1998), Time Series Models for Business and Economic Forecasting, Cambridge Press, New York.
- 9) Anderson, T.W. (1958), Introduction to Multivariate Statistical Analysis, Chapman and hall, London.
- 10) Krishna, K. L. (1997), Econometric Applications in India, Oxford University Press, New Delhi.
- 11) Kennedy, P ( 1998) A Guide to Econometrics 4<sup>th</sup> edition, MIT press, New York.
- 12) Goldberger, A. S. (1998), Introductory Econometrics, Harward University press, Cambridge, Mass.
- 13) Johnson Richard and Wichern Dean (2014), 'Applied Multivariate Statistical Analysis,' PHI Learning Pvt. Ltd. Delhi

## AEC-CC-304

### Practical -1 Computer Application for Statistical Analysis and Visualization

**In this practical work, hands on training of applying statistical tools for analysis and display of data will be given to students. The easily available MS-EXCEL application will be used at most and same statistical analysis will be again exercised using SPSS for special statistical tools. Students are expected to give their practical performance during internal and final examination.**

**Learning objective:** The main objective of this practical course is to provide analysis skill to students using modern techniques for large data set.

**Learning Outcomes:** The hands on training received in the practical will be helpful to students for own research purpose. At the end of the course students will be able to analyse large data sets using mathematical and statistical tools.

#### **Exercise -1 (MS-EXCEL application)**

Data importing in MS excel

Use Sort and Filter options,

Use of Formulas and Functions,

Doing Mathematical Calculations, Conditional Calculations, Pivot Tables.

Data cleaning procedure.

#### **Exercise -II (MS-EXCEL application)**

Use of Statistical Functions,

Using the Analysis Tool Pack (ANOVA, Descriptive Statistics, Exponential Smoothing, F-Test Analysis, Histogram, Moving Average, Random Number Generation, Rank and Percentile, Sampling.

#### **Exercise-III (MS-EXCEL application)**

Displaying Data in Charts- Column charts, Line Charts, Pie Charts, Bar Charts, Area Charts, Scatter Charts, Stock Charts, Surface Charts, Doughnut Charts, Bubble Charts, Radar Charts.

Open source software for data visualization- Making the live charts, and mind maps.

#### **Exercise-IV**

Data collection using Google forms.

Use of Open source software for statistical analysis like R and others.

# **AEC-DE-305**

## **(A)Demography**

**Learning Objectives:** The main objectives of this paper are to make the students aware of the different demographic concepts, to make them understand the various theories of population, to explore the knowledge of current demographic situation of India and World, to guide them to access demographic data base, to equip the students with quantitative and qualitative aspects of demographic analysis.

**Learning Outcomes:** After completion of this course students will be well versed with various demographic concepts and its world scenario, they will be able to analyze the fertility, mortality and migration for policy purpose. Students will be able to contribute in policy framing through their research work.

### **Unit -1 Population Growth, Structure and Policy**

1.1 Introduction of population and demography.

1.2 Prominent Theories of population (Malthusian Theory, optimum population and demographic transition)

1.3 Sources of population data (Civil Registration System, NSS, NFHL) and relative merits and demerits of these sources.

1.4 Population growth and trend in India and world.

1.5 Pattern of age and sex structure,

1.6 Causes of population change and its Implications.

1.7 Salient features of Census, India's Population Policy.

### **Unit -2 Fertility and Nuptiality**

2.1 Meaning, Measurement of fertility.

2.2 Importance of fertility analysis, Fertility in more and less developed countries, Factors affecting fertility.

2.3 Nuptiality - Concept and analysis.



## **Unit -3 Mortality**

3.1 Meaning and Measurement of Mortality.

3.2 Importance of Mortality analysis and Mortality experience from more and less developed countries.

3.3 Concept of epidemic and pandemic.

3.5 Sex and Age pattern of mortality

3.6 Concept of Life expectancy and construction of Life table and its uses

3.7 Methods of population projection.

## **Unit 4 Migration and Urbanization**

4.1 Concept, types and trend of migration

4.2 Factors affecting migration

4.3 Theories of migration

4.4 Implications of Migration

4.5 Measurement of Migration

## **Suggested Readings**

1) Bogue, D.J. (1971), Principles of Demography, John Wiley, New York

2) Srinivasan, K. (1998), Basic Demographic Techniques and Applications, Sage, New Delhi

3) Bose, A. (1996), India's Basic Demographic Statistics, B.R. Publishing Corporation, New Delhi

4) Sryrock, H. et. al (1973), The Methods and Materials of Demography, US Department of Commerce, Washington, D.C.

5) United Nations (1973), The Determinants and Consequences of Population Trends, Vol. 1, UNO Publications, New York

6) Chiang, C.L. (1974), Life Tables and Mortality Analysis, W.H.O., Geneva.

7) K.Bruce Newbold (2012), Population Geography Tools and Issues, Rawat Publications, Jaipur, India.

- 8) Novell, C. (1988), *Methods and Models in Demography*, Bellhaven Press, London.
- 9) P. K. Mujumdar (2013), *India's Demography; Changing Demographic Scenario in India*, Rawat Publications, Jaipur, India.
- 10) Agarwala S.N. (1972), *India's Population Problem*, Tata McGraw-Hill Co., Bombay.
- 11) Chenery H. and T.N. Srinivasan (Eds.) (1989), *Hand Book of Development Economics*, Vol. 1 & 2 Elsevier, Amsterdam.
- 12) Choubey, P.K. (2000), *Population Policy in India*, Kanishka Publications, New Delhi.
- 13) Coale A.J. and E.M. Hoover (1958), *Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects*, Princeton University Press, Princeton.
- 14) Gulati, S.C. (1988), *Fertility in India: An Econometric Study of a Metropolis*, Sage, New Delhi.
- 15) Simon, J.L. (1992), *Population and Development in Poor Countries*, Princeton University Press.
- 16) Srinivasan, K. and A. Shariff (1998), *India: Towards Population and Demographic Goals*, Oxford University Press, New Delhi
- 17) Mitra, A. (1979), *Implications of Declining Sex Ratio in India's Population*, Allied, New Delhi
- 18) Mishra S. (2000), *Voluntary Action in Health and Population : The Dynamics of Social Transition*, Sage, New Delhi.

#### Population Database

- 1) Census Authority of India
- 2) World Population Prospects (UN)

## **AEC-DE-305**

### **(B) India's Foreign Trade and Balance of Payments**

**Learning Objectives:** The main objective of this course is to explore international economic situation of India, its BOP situation, exchange rate, international economic relations and policies.

**Learning Outcomes:** After studying this paper students will be able to discuss on India's BOP situation for policy purpose. Students will be able to measure the terms of trade and overall international financial situation of India. Students will get sound orientation on the trade related policies of India.

#### **Unit-1 Trade and Balance of Payments**

- 1.1. Global trade and its growth, India's relative position in the world trade over a period.
- 1.2 Foreign trade before and after Independence of India-Composition and Direction
- 1.3 Current and Capital Account Situation, Invisibles by Category of Transactions and Balance of Payments.
- 1.4 Balance of Payments Crisis and Balance of Payments since New Economic Reforms of 1991.

#### **Unit- 2 Terms of Trade and Exchange Rate**

- 2.1 Calculation of terms of trade, and its favorable unfavorable conditions.
- 2.2 Exchange Rate of the Indian Rupee with prominent currencies.
- 2.3 Devaluation, Appreciation and Depreciation of Rupee and Effects on Foreign Trade
- 2.4 Real Effective Exchange Rate (REER) and Nominal Effective Exchange Rate (NEER) for India.
- 2.5 Exchange Control – Exchange rate policy in India.
- 2.6 Situation of Foreign Exchange Reserves in India.

#### **Unit-3 International organizations, Economic Integration and Trade Finance in India**

- 3.1 WTO and Issues Related to India.
- 3.2 IMF and India

- 3.3 Foreign Collaboration, Joint Venture & Exports.
- 3.4 India's membership in Economic Integration.
- 3.5 External Assistance, NRI Deposit.
- 3.6 Foreign Investment Inflows, types and trend.
- 3.7 Role of EXIM bank.

#### **Unit-4 India's Foreign Trade Policy**

- 4.1 Review Foreign Trade Policies of India.
- 4.2 Current Trade Policy of India.
- 4.3 Export Promotion Measures, EOU, EPZ-SEZ and other.
- 4.4 Convertibility of Rupee and impact on Foreign Trade.

#### **Suggested Readings**

1. Datt & Sundharam: Indian Economy, Sundharam C. Shand Publication.
2. Dr. Dhanashri Mahajan: International Economics, Pimplapure Prakashan.
3. Dr. S. Desai and Dr. Mrs. Nirmal Bhalerao: India Economy, Nirali Publication, Pune.
4. RBI Hand book of Statistics on Indian Economy.
5. Foreign trade policy documents various issues. (DGFT Ministry of Commerce and Industry)

**AEC-CC- 401**  
**International Macroeconomics**

**Learning Objectives:** The objective of this paper is to explore the macro picture of balance of payments accounts and its relationship with national income accounts. It is also aimed to explore exchange rate mechanism and its macroeconomic effects in various situation.

**Learning outcomes:** After completing this course students will be able to analyze the Balance of payments situations, students will also be able to understand the process of exchange rate determination, changes in it and its impact on balance of payments. Students will be able to analyze the macroeconomic situation linked with international trade and finance. This knowledge will be highly useful for students to work on macro international economic problems.

**Unit-1 Foreign Exchange Markets and Exchange Rate**

- 1.1 Foreign exchange market-meaning, characteristics and participants
- 1.2 Concept of arbitrage
- 3.3 Financial Instruments Used - Spot Rate, Forward Rate, New deliverable forward, currency swap, futures and options.
- 1.4 Speculation, Risks and Hedging
- 1.5 Covered and Uncovered Interest Arbitrage, Covered interest arbitrage parity and margin
- 1.6 Concepts of efficiency in FOREX market, EURO currency and offshore financial market.

**Unit-2 Exchange Rate Determination**

- 2.1 Mint Parity Theory
- 2.2 Approach of Purchasing Power Parity- Absolute and Relative.
- 2.3 BoP and external balance approach
- 2.4 Monetary Approach
- 2.5 Asset / Portfolio Balance Approach
- 2.6 Interest rate parity approach
- 2.7 Exchange rate dynamics.

**Unit-3: Balance of Payments and National Income Accounts and BOP adjustment mechanism.**

- 3.1 Meaning, Component, and Accounting Principal of BOP
- 3.2 BOP Imbalance and Causes of Imbalance
- 3.3 BOP and National Income Accounts

3.4 Balancing Mechanism-I Price adjustment mechanism with Change in Exchange Rate, Effect of exchange rate changes on domestic prices and terms of trade, stability in FOREX market and Marshall-Lerner condition, J curve effect, Adjustment under Gold Standard.

3.5 Balancing mechanism-II Income adjustment mechanism with change in level of national income. 3.6 Concept of Foreign Trade Multiplier and Foreign Repercussions.

3.7 Monetary adjustment.

#### **Unit-4 Open Economy Macroeconomics: Adjustment Policies**

4.1 Macro Objectives of Nation

4.2 Expenditure Changing and Expenditure switching policies

4.3 Equilibrium in Goods market Monetary Market and Balance of Payments.

4.4 Fiscal and Monetary policies for internal and external balance.

4.5 IS-LM-BP model with flexible exchange rate.

4.6 IS-LM-BP model with flexible exchange rate and perfect capital mobility.

4.7 Policy mix and Policy Control.

4.8 Prices and output in open economy: Aggregate demand and Aggregate supply

4.9 Macroeconomic policies to stimulate growth and adjust to supply shocks.

#### **Suggested Readings**

1) Dominick Salvatore (2007), International Economics, Published by John Wiley & Sons, Ninth Edition, ISBN- 0471794686.

2) Cristina Terra (2014) Principles of International Finance and Open Economy Macroeconomics Theories, Applications, and Policies, Elsevier-ISBN: 978-0-12-802297-9.

3) Gincarlo Gandolfo (1987), International Monetary Theory and Open Economy Macroeconomics, Springer, ISBN-978-3-662-07979-9.

4) Robert C. Feenstra, Alan M. Taylor (2011), International Macroeconomics, Worth Publishers, ISBN-978-1-4292-4103-8.

5) Nelson C. Mark (2000), International Macroeconomics and Finance: Theory and Empirical Methods, Blackwell Publishers.

6) Paul Krugman (2002), International Economics: Theory and Policy, Published by Addison Wesley, ISBN- 0201770377.

7) Feenstra Robert C. (2004), International Trade: Theory and Evidence, Princeton, University Press, Princeton.

8) Grimwade Nigel (2001). International Trade, (Latest edition), Routledge. London.

9) Grubel H. G. And Lloyd P. J. (1975), Intra-Industry Trade: The Theory and Measurement of International Trade in Differentiated Products, the Macmillan Press Ltd., London.

10) Södersten Bo and Reed Geoffrey (1994), International Economics, Mcmillan, London.

11) Krugman P. and M. Obstfeld (2000), 'International Economics: Theory and Policy', 5<sup>th</sup> edition, Addison Wesley Longman Pvt. Ltd.

12) Chacoliades: International trade, Theory and Policy, Mc.Graw Hills, 1978.

## **AEC-CC- 402**

### **Research Dissertation**

The fourth semester students have to complete a Research Dissertation for 100 marks (4 credits) in consultation with the supervisor allowed to them.

## **AEC-CC-403**

### **Indian Public Economics**

**Learning Objective:** This paper helps to understand fiscal institution, tax structure and its distribution, public policy and other several issues related to public economics in context of India .It helps to know the nature, structure and functioning of the public economics, especially with reference to India.

**Learning Outcome:**The Student will be able to understand the Structure of the Indian public Economics ,public expenditure of India ,all the taxes, distribution of taxes among the centre and state ,centre –state relation ,Finance commission ,Budget and Tax reform Committees in India .They will also can able to analyze the fiscal policy in India and its impact on Indian Economy.

#### **Unit-1 The Indian Tax System:**

1.1 Tax Structure under the Indian Constitution

1.2 Taxes of the centre government: Income tax, Corporate tax, Expenditure tax, wealth tax, Gift Tax, Custom duties, Excise duty etc.

1.3 Taxes of the state Government - Agriculture income tax, Sales tax, Land revenue, Motor vehicle tax, Stamps & Registration, VAT etc.

1.4 Taxes of the local Government

1.5 Tax reforms committees and Tax reforms in India

1.6 GST. Indian tax system: salient characteristics.

#### **Unit -2. Public expenditure in India:**

2.1 Growth of public expenditure in India, classification of public expenditure in India.

2.2 Composition of revenue expenditure, composition of capital expenditure, Plan and non-plan expenditure.

2.3 Trend of public expenditure in India, Reasons behind continuous growth of public expenditure.

### **Unit-3 Fiscal federalism in India:**

- 3.1 Meaning of fiscal federalism
- 3.2 Distribution of sources of revenue between centre and state in India- constitutional provisions.
- 3.3 Recourses transfer from union to state.
- 3.4 Finance commission In India
- 3.5 Centre –state financial relation in India, Local finance in India.

### **Unit- 4 Public Debt and Budget in India:**

- 4.1 Public debt in India, classification of public debt in India ,
- 4.2 Growth of public debt in India
- 4.3 Internal and external public debt in India ,Burden of public debt on Indian economy .
- 4.4 Structure of budget in India, Budget of the union government in India.

### **Suggested Readings:**

1. Richard A. Musgrave (1989), Public Finance in Theory and Practice McGraw Hill Book Company, New York.
2. Dr.Tyagi B.P., Public Finance, Jai Prakash Nath Pub.Meerat (UP).
3. Buchaman J.M. (1970), the Public Finances, Richard D.Irwin, Homewood.
4. Jha H. (1998), Modern Public Economics, Routledge, London.
5. Singh S.K. (1986) Public Finance in Developed and Developing Countries, S.Chand and Company Ltd, New Delhi.
6. R.K. Choudhury, Economics of public sector and public utility, Himalaya publication house, Bombay.
7. Public Finance, R.K. Lekhi, Kalyani Publication, New Delhi
8. Tripathy R.N. Public Finance in Underdeveloped Countries.
9. Alka Gupta, Public Finance & Tax planning, Anmol publication pvt.ltd, New Delhi.
10. Janak Raj Gupta, Public Economics in India: Theory & practices, Atlantic Publishers, New Delhi.
11. Surry M.M. ,Finance Commission of India ,New Century ,2005.



## **AEC-CC-404**

### **Practical-II**

#### **Computer application for Mathematical Economics and Econometrics**

**In this practical work, hands on training of applying computer tools for mathematical and econometric operations. The easily available MS-EXCEL application will be used at most and in same line use of SPSS and other open source software will be made where ever is applicable. Students are expected to give their practical performance during internal and final examination.**

#### **Learning Objectives:**

- 1) This course aims to give application of mathematical and econometrics techniques with the help of Microsoft Excel, SPSS and other open source software.

#### **Learning Outcomes:**

- 1) Student will be able to interpret the research data by using computational software
- 2) They will able to solve the real practical examples related to Indian economy, with the help of data analysis solver in Excel, and using SPSS and open source software's.

#### **Exercise-1**

Using the Quadratic formula, Using Solver with graphs, Calculating numerical expressions, Function notation, Creating function tables, Piecewise function, Finding Maximum and Minimum, Exponential and Logarithmic function, Quadratic and exponential regression.

#### **Exercise-2**

Matrix addition and subtraction, Scalar and Matrix Multiplication, Product of two matrices, Inverse of a Matrix, Determinant of a Matrix, Solving systems of using Matrix, Graphing an Inequality, Maximization, Linear programming

#### **Exercise-3**

Limits, Rate of Change, Extreme of functions of Several Variables, Lagrange Multipliers, Numerical Integration, the definite integral, Frequency Distribution, Normal distribution, Boxplots, Factorial, Permutations, Combinations, Expected Value, Binomial probability.

#### **Exercise-4**

Autocorrelation- Durbin Watson test, Testing Heteroscedasticity Statistically, Detecting Multicollinearity, Binary Logistic Regression- Probit and Logit, Creating Dummy Variables, Time Series Analysis and Interpretation of Results.

## **AEC-DE- 405**

### **(A) Financial Institutions and Markets**

#### **Learning Objectives:**

- 1) The aim of this course is to introduce students to the institutional environment in which financial transactions take place.
- 2) To understand the role of central bank, regulations and innovations.
- 3) To figure out the role of money and capital markets in Indian economy.

#### **Learning Outcomes:**

- 1) The students will be able to learn Indian financial systems, how it operates and its role in economics.
- 2) The students will have evaluated regulation of Indian financial system.
- 3) They will have understood role of NBFC and share market in the economy.

#### **Unit-1 Introduction to Indian Financial System:**

- 1.1 Components of Indian financial system-Financial Institutions, Financial Markets, Financial Instruments, Financial Services.
- 1.2 Development banks: IFCI, IDBI, ICICI, IIBIL, IRBI, SIDBI, IDFC, SFC and SIDCs.
- 1.3 Central Bank-Functions, Instruments of Monetary policy, profitability and efficiency of Public and Private sector banks

#### **Unit-2 Non-Banking Financial Institutions and Services:**

- 2.1 Types & classification of NBFI, Nidhis or Mutual benefit finance companies (MBFC), Chit Funds or Miscellaneous Non-banking Companies (MNBCs).
- 2.1 Financial Instruments and Financial Services- Characteristics, Kinds of Financial Services, Fee based Advisory Services.

#### **Unit-3 Money Market and Capital Market:**

- 3.1 Structure & components of Money Market, Characteristics of a Developed Money Market, Significance of money market, money market Instruments.
- 3.2 Structure & Components of capital market, capital market instruments- ownership securities, credit or ship securities, Methods of Marketing Securities, Recent Developments in Primary Market capital

#### **Unit-4 Stock Exchange:**

4.1 Characteristics & functions of Stock Exchange, Major Stock exchanges in India, weaknesses of stock exchanges in India,

4.2 Methodology for calculating stock market index, Important Indices in India, venture capital.

#### **Suggested Readings:**

1. Bansal, L.K., Mutual Fund Management and Working, Deep and Deep Publication, New Delhi, 1996.
2. Batra, G.S., Management of Financial Institutions and Markets, Deep and Deep Publications, Delhi, 1997.
3. Bhole, L. M., Financial Institutions and Markets: Structure, Growth and Innovation, Tata McGraw Hill, New Delhi, 1998.
4. Dangwal, R.C. Institutional Finance and Industrialisation, Deep and Deep Publications, New Delhi, 1998.
5. Desai, Vasant., Development Banking in India: Issues and Options, Himalay Publication House, 1998.
6. Edminister, R.O., Financial Institutions, Markets and Managements, Tata McGraw Hill, New York, 1986.
7. Fensermaker, J. D., Readings in Financial Markets and Managements, Tata McGraw Hill, New York, 1986.
8. Gupta, Shashi k and Sharma R.K., Financial Management- Theory and Practice, Kalyani Pub., New Delhi, 2003.
9. Houthakkar Hendrik, S. and Peter J. Williammson., The Economics of Financial Markets, Oxford University press, 1996.

## **AEC-DE-405**

### **(B) Gender Economics**

**Learning Objective:** Gender biases in societal practices and development policies have resulted in persistent gender inequalities. It is increasingly being realized that mitigating such inequalities and enhancing women's capabilities and entitlements are crucial to the overall development of the country. This course would provide students an understanding of the nature of the economic role of women and their contribution to the national economy on the basis of a scientific and non-sexist analysis. The modules incorporated in this course provide an analysis of issues at the theoretical level and also with regard to specificity of issues prevailing in the Indian context.

#### **Learning Outcomes:**

The Student will be able to understand the role of women in economic development and the actual situation of the women development in India. This paper can help to minimize the barriers before women empowerment and create the gender equality through curriculum.

#### **Unit -1 Introduction to Gender Studies:**

1.1 Key concepts in Gender studies, Need, Scope and challenges of Women's Studies – Women's Studies as an academic discipline, Women's Studies to Gender Studies, Need for Gender Sensitization.

1.2 Women's Movements – global and local: Pre-independence, Post-independence and Contemporary Debates.

1.3 National Committees and Commissions for Women.

1.4 Liberal Feminism, Marxist Feminism, Radical Feminism, Socialist Feminism, Indian Feminism, Black Feminism, Eco-Feminism.

#### **Unit-2 Gender Education and Health:**

2.1 Women's Education – Gender diversities and disparities in enrolment, Curriculum content, Dropouts, profession and Gender.

2.2 Life Cycle Approach to Women's Health – Health status of women in India, factors influencing health and Nutritional status.

2.3 Issues of declining Child Sex Ratio, Widowhood and old age.

2.4 Occupational and mental health.

2.5 Health, Hygiene and Sanitation.

### **Unit-3 Women, Work and Employment:**

3.1 Concept of Work – Productive and non – productive work – Use value and market value.

3.2 Gender Division of Labour – Mode of Production – Women in organized and unorganized sector.

3.3 New Economic Policy and its impact on Women's Employment – Globalization – Structural Adjustment Programs.

### **Unit-4 Women Empowerment and Development:**

4.1 Theories of Development, Alternative approaches – Women in Development (WID), Women and Development (WAD) and Gender and Development (GAD).

4.2 Empowerment- Concept and indices: Gender Development Index (GDI), Gender Inequality Index (GII), Global Gender Gap Index (GGGI).

4.3 Women Development approaches in Indian Five – Year Plans.

4.4 Women and leadership– Panchayati Raj and Role of NGOs and Women Development.

4.5 Sustainable Development Goals, Policies and Programmes.

### **Suggested Readings**

- 1) Boserup E. (1970), Women's Role in Economic Development, George Allen and Unwin, London.
- 2) Desai, N. and M.K. Raj. (Eds.) (1979), Women and Society in India, Research Centre for Women Studies, SNDT University, Bombay.
- 3) Government of India (1974), Towards Equality — Report of the Committee on the Status of Women in India, Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi.
- 4) Krishnaraj, M., R.M. Sudarshan and A. Shariff (1999), Gender, Population and Development, Oxford University Press, New Delhi.
- 5) Seth, M. (2000), Women and Development : The Indian Experience, Sage Publications, New Delhi.
- 6) Srinivasan K. and A. Shroff (1998), India : Towards Population and Development Goals, Oxford University Press, New Delhi.
- 7) Venkateswaran, S. (1995), Environment, Development and the Gender Gap, Sage Publications, New Delhi.
- 8) Wazir, R. (2000), The Gender Gap in Basic Education : NGOs as Change Agents, Sage Publications, New Delhi.