



**GIRIJANANDA CHOWDHURY UNIVERSITY, ASSAM**

Hatkhowapara Azara, Guwahati-781017

## **Syllabus**

**Department of Economics**

**Semester: First (IV)**

**Programme: Post Graduate Programme**

**(M.A./M. Sc in Economics)**

(The Revised syllabus is passed under Programme Committee and placed in the 6<sup>th</sup> BOS, SHSS)

**(Prof. Jayanta K. Sarmah, GU)**

**(Prof. Shantanu Chakravarty, Dean)**

**(Dr. Sampurna Bhuyan)**

External Expert

Chairperson, BOS

Member Secretary

## SEMESTER IV

### Course: Economic Demography (Core)

Course Code: MEM23604T

Semester: IV

Total sessions: 60

Total Credit: 04(four)

L-T-P: 4-0-0

#### Course Objectives:

1. To understand the causes and consequences of demographic changes, such as population aging, urbanization and population growth
2. Enable the students to apply demographic theories and methods to analyze population trends at local, national and global levels.
3. Develop student's critical thinking skills to evaluate the interplay between demographic factors and economic outcomes at various levels including individual, regional and global scales.

#### Course Outcomes:

Co1. **Understand** the basic demographic concepts like- population, aging, fertility, infant mortality.

Co2. **Identify** the integrated frameworks for the complex demographic processes and economic development.

Co3. **Analyze** demographic data and trends using appropriate statistical measures and methods.

Co4. **Develop** demographic interventions or policies to address population challenges in a specific context.

## Syllabus

Unit	Contents	Hours
1.	<b>Basic Concepts, Indicators and Theories:</b> Meaning and Scope of demography, Population and Economic Development; Vital Rates – Fertility, Mortality, Age Pyramids, and Life Tables; From Development to Population; Theory of Demographic Transition; Historical Trends; Adjustment of Birth and Death Rates; Malthusian View; Growth Impact; Population and Environment; Population and Innovation; Markets and Inputs	15
2	<b>Population Projection:</b> National Projection of Total Population and Age-Sex composition –National & Sub-National Projection of Population; Projection of the Economically Active Population; Concepts of Stable, Stationary, and Quasi-Stationary Population.	15
3.	<b>Population and Population Policy in India:</b> Major demographic features of India's population – Spatial, Age, Sex, Structure of Indian Population; Birth rate, Death rate, Life Expectancy & Infant Mortality; Trends & Patterns; Evaluation of family welfare programmes in India - National Population Policies since independence.	15
4.	<b>Aging and Demographic Change:</b> Aging Process, Ageing around the world, The impact of demographic changes, The changing balance of age groups, Social, Economic, and Demographic Changes among the Elderly, Dependency ratio, Generational accounting and Pensions crisis; Social Groups and Family Size.	15

### Syllabus

#### Text Books& Reference Books:

1. Choubey, P. K. (2000). Population Policy in India. New Delhi: Kanishka Publications.

2. Dandekar, V.M. (1998). Population Front of India's Economic Development. Economic and Political Weekly. 22(17): 837-842. Srinivasan, K. and A. Shariff (1998), India: Towards Population and Demographic Goals, Oxford University Press, New Delhi
3. Srinivasan, K., (1992) Basic Demographic Techniques and Applications, Sage Publications, New Delhi. Weil, David N., (1997) "The Economics of Population Aging" in Mark R. Rosenzweig and Oded Stark, eds., Handbook of Population and Family Economics, New York: Elsevier, 967- 1014.

**Course: Environmental Economics (Core)**

**Course Code: MEM23605T**

**Total Hours: 60**

**Total Credit: 4**

**L-T-P: 4-0-0**

**Course Objectives:**

1. To introduce the students to environmental issues with an interdisciplinary focus.
2. To provide students with a basic understanding of the cost of environmental growth and environmental degradation,
3. To make students aware of sustainable policy approach to check environmental degradation, methods of environmental valuation.

**Course Outcomes:**

- CO1. **Understand** the fundamental concepts, subject matter, nature and scope of environmental economics.
- CO2. **Illustrate** the various approaches, methods and environmental issues in relation to the theory of externalities, public goods, welfare, development and environmental cost benefit analysis.
- CO3. **Apply** economic principles concerning the choice of instruments for controlling pollution and the relative strength and weaknesses of environmental policies.
- CO4. **Analyse** various issues in the contemporary environmental discourse from an economists' point of view.

## Syllabus

Unit	Content	Hours
1	<p><b>Introduction to Environmental Economics–</b></p> <p>Scope and Nature of Environmental Economics, Ecological Economics and Resource Economics; Basic Concepts: Natural Resources-Renewable and Non-Renewable, Market Failure, Externality, Property Rights, Transaction costs, Pigouvian Tax–Environment as Public Goods-Open Access–The Tragedy of Commons.</p> <p>Global Environmental Issues-Climate Change and its impact, Trade and Environment: Pollution Havens Hypothesis</p>	15
2	<p><b>Valuation of Environmental Goods and Services</b></p> <p>Demand for environmental goods –ordinary goods vs. environmental goods-Willingness to pay and Willingness to accept-Use and Non-use Values; measuring demand-revealed preference and stated preference. Methods for measuring benefits of environmental improvement–the market pricing approach, the replacement cost approach. Hedonic Pricing approach-valuation of health risks; Household Production Function Approach -Aversive expenditure, Travel Cost method; Contingent Valuation Method</p>	15
3	<p><b>Instruments of Pollution Control</b></p> <p>Pollution Prevention, Control and Abatement– Non-Market based instrument-Command and Control Approach and Market Based Instruments–Taxes Vs Tradable Permits; International Conventions and Protocols; Environmental Policy in India-Environmental Impact Assessment.</p>	15
4	<p><b>Economic Development and Environment</b></p> <p>The relation between Development Environmental Quality- Environmental Kuznets Curve; Development Vs Conservation of environmental resources; Ecosystem flips and irreversibility- Krutilla-Fisher equation, Environmental Cost-benefit Analysis</p>	15

**Text Books:**

1. Kolstad, Charles D., (2011) *Intermediate Environmental Economics*, Oxford University Press.

2. Hanley, Shogren and White., (2006). *Environmental Economics*, 2<sup>nd</sup> edition, Macmillan.
3. Shanker., (2001). *Environmental Economics*, 1<sup>st</sup> edition, Oxford University Press.

**Reference Book/Readings:**

1. Robert U Ayres and Allen V Kneese, 1969, 'Production, Consumption, and Externalities', *American Economic Review*, LIX (June): 282-297.
2. William J Baumol, 1972, 'On Taxation and the Control of Externalities', *American Economic Review*, LXII (3): 307-22
3. Thomas M Parris and Robert W Kates, 2003, 'Characterizing and Measuring Sustainable Development', *Annual review of Environment and Resources*, XXVIII (1): 559-586.
4. Ahmed Hussen, 2013, *Principles of Environmental Economics and Sustainability: An integrated economic and ecological approach*, Routledge, UK.

**Course: Research Project /Dissertation**

**Semester-IV**

**Course Code: MEM23606R**

**Total Credit: 04(four)**

**L-T-P: 0-0-8**

**Course Objectives:**

1. Enhance student's ability to conduct comprehensive literature review, critically evaluate existing research and identify gaps in economic knowledge.
2. Equip students with the skill to collect relevant data through various sources and methods and analyze those using appropriate statistical or econometric techniques.
3. Guide students in formulating clear and concise research questions or hypotheses that address significant issues or debates within the field of economics.
4. Foster students' ability to communicate research findings effectively through well-structured and coherent reports as well as compelling oral presentations.

**Course Outcomes:**

Co1: Apply economic theories and methodologies to analyze real-world data and phenomena related to the research topic.

Co2: Interpret research findings accurately and assess their implications for theory, policy or practice

**Methodology:**

The dissertation work is carried out under the guidance of a faculty with scheduled meetings for discussion of the progress of the work and timely interim presentations before a panel of faculty to assess the quality of the work. The final submission of the dissertation is followed by a viva voce on the topic of the research.

**Evaluation:** The components of evaluation may be

Regularity of meeting with guide for discussions, Proposal presentation by student, Pre-submission defense by student and final report evaluation by expert.

**Course: Economics of Gender  
(Elective)**

**Course Code: MEM23624T  
Semester-IV**

**Total sessions: 60**

**Total Credit: 04(four)**

**L-T-P: 4-0-0**

**Course Objectives:**

1. Develop a nuanced understanding of the socio-economic factors influencing gender disparities in education, employment opportunities, income and wealth accumulation.
2. Examine the role of cultural attitudes, institutional practices and macroeconomic forces in shaping gender roles, division of labour and distribution of unpaid care work within households and societies.
3. Appraise the impact of public policies, labor market interventions and social norms on gender equality outcomes including affirmative action, parental leave policies and anti-discrimination legislation.

### Course Outcomes:

CO1. Understand the mechanisms through which social norms, cultural beliefs and institutional practices contribute to gender-based economic disparities.

CO2: Examine wage differentials and the feminization of poverty and the factors contributing to these economic phenomena.

CO3: Analyze the historical and contemporary trends in work participation rate in different sectors of the economy.

CO4: Evaluate gender planning and budgeting tools to design policies that promote gender equality in economic development.

### Syllabus

Unit	Content	Hours
1.	<b>Importance and concepts of women studies:</b> Women in patriarchal and matriarchal societies and structures, patrilineal and matrilineal systems and relevance to present day society in India; Economic basis and functioning of patriarchy in developed Countries and LDCs, particularly India, protection of property rights of women and social security.	15
2	<b>Demography of female population:</b> Age structure, mortality rates, and sex ratio. Causes of declining sex ratios and fertility rates in LDCs and particularly India – theories and measurement of fertility and its control. Women and their access to nutrition, health, education and social and community resources, and its impact on female mortality and fertility, economic status, and work participation rate.	10
3.	<b>Decision making by women, gender planning and budgeting:</b> Access to and control over economic resources and assets; Power of decision making at house hold, class-community level. Economic status of women and its effect	15



	on work-participation rate, income level, health, and education in developing countries and India. Gender and development indices; mainstreaming gender into development policies; Gender planning techniques and budgeting; Gender sensitive governance.	
4.	<b>Concept and analysis of women's work:</b> Valuation of productive and unproductive work; visible and invisible work; paid and unpaid work; economically productive and socially productive work. Factors affecting female entry in labour market; Supply and demand for female labour in developed and developing countries, particularly India. Studies of female work participation in agriculture, non-agricultural rural activities, informal sector, cottage and small-scale industries, organized industry and services sector.	10
5.	<b>Economic Growth, Wage Differentials and Feminization of Poverty,</b> Impact of economic growth on gender (in) equality; Impact of gender equality on growth and socio-economic development. Determinants of wage differentials; Gender and wage differentials; gender wise wage structure across regions and economic sectors. Feminization of poverty - concept, causes and measurement.	10

#### **Books Recommended:**

1. Boserup, E. (1970), Women's Role in Economic Development, George Allen and Unwin, London.
2. Fukuda Purr and Shiva Kumar (2004), Readings in Human Development: Concepts, Measures and Policies for a Development Paradigm, Oxford University Press.
3. Ghosh, J. (2002), "Globalization, export-oriented employment for women and social policy: A Case study of India", Social Scientist, Vol 30 (11 & 12), pp. 17 – 60.
4. Momsen, J. (2004), Gender and Development, Routledge, 2nd Edition.

**Course: Operations Research**

**Course code: MEM23625T**

**Semester: IV**

**Total Hours: 60**

**Credit: 4**

**L-T-P: 4-0-0**

**Course Objective**

1. To identify and develop mathematical model for quantitative analysis of socio- economic problems
2. To provide deep understanding of tools in optimization, simulation, linear programming and game theory.
3. To understand the applications of integer programming problems and specially structured linear programmes like transportation and assignment problems.

**Course Outcome:**

CO1. **Explain** the importance and value of operation research and mathematical modelling to allocate resources economically.

CO2. **Examine** optimal decision-making process using various quantitative and qualitative methods.

CO3. **Apply** the knowledge in transportation and assignment problems and game theory to get optimal solutions.

CO4. **Evaluate** different models for service and manufacturing systems.

**Syllabus**

Unit	Content	Hours
1	<b>Introduction to Operations Research:</b> Definition, features of Operations Research, scientific method in Operations Research, opportunities and shortcomings. An overview of linear programming, formulation of some special problems, solution methods for the ill-behaved problems, Mathematical formulations of LP Models for product mix problems, Graphical and Simplex Method for solution of maximization and minimization problems, Duality	15

2	<p><b>Transportation Problem</b></p> <p>Introduction to transportation problems, North-West corner rule, Least cost method, Vogel's approximation method for obtaining initial feasible solutions, Stepping stone and MODI method to get optimal solution.</p> <p>Assignment Problem: Hungarian Method, Unbalanced assignment problems, Constrained Assignment problems</p>	15
3	<p><b>Theory of Games:</b></p> <p>Concept of game; Two-person zero-sum game; Pure and Mixed Strategy Games; SaddlePoint; Dominance Method and Graphical Method for solving Mixed Strategy Games</p>	15
4	<p><b>Introduction to simulation:</b> Phases, Monte Carlo Simulation and its application, advantages and disadvantages; estimation of inter-arrival time distribution.</p>	15

**Text Book:**

1. ND Vohra (2017), Quantitative Techniques in Management, 5<sup>th</sup> Edition, Mc Grew Hill publishing
2. JK Sharma, (2005) Operations Research Theory and Applications, 5<sup>th</sup> Edition MacMillan

**Reference Book:**

1. H A Taha, (2019)Operations Research- An Introduction,10<sup>th</sup> Edition Pearson

**Course: Health Care Economics (Elective)**

**Course Code: MEM 23626T**

**Semester: IV**

**Total sessions: 60**

**Credit: 4 (Four)**

**L-T-P: 4-0-0**

**Course Objectives:**

1. To enable students to grasp strong conceptual and theoretical explanations in healthcare issues.
2. To do economic evaluations of health care programs and policies.

**Course Outcome:**

CO1. **Understand** the importance and challenges of implementing economic theories in effective health care decision making.

CO2. **Apply** the knowledge to issues in health care delivery and financing.

CO3. **Analyze** issues regarding demand and supply of health, public health care policies, health care finance and insurance etc.

CO4. **Evaluate** the issues in health care delivery mechanism and implementation of health policy.

**Syllabus**

<b>Unit no</b>	<b>Contents</b>	<b>Hours</b>
<b>1</b>	<b>Health Economics: Overview and Structure</b> Concepts and Terminologies in Health Economics, Health as an Economic Good, Economics of Health vs Economics of Healthcare; Arrow's Perspective on Healthcare	15
<b>2</b>	<b>Demand and Supply in Healthcare:</b> Utility and Health, Demand for Health care; The Grossman Model, The Grossman Model and Health Disparities, Supply Induced Demand; Hospitals as Health Providers of Health- Production and Cost of Healthcare	15

3	<b>Health Care Financing and Insurance:</b> Financing Health care, Uncertainty and Risk - Health Insurance; Information Economics in Health: Moral Hazard, Adverse Selection	15
4	<b>Public Health and Policies</b> Introduction to Public Health, Healthcare provisioning and responsiveness, Socio-economic disparities in Health- global perspective, Indian Health System: organization and governance, Indian Health Status: reforms, status, and future challenges	15

**Text Book:**

1. Bhattacharya, J., Hyde, T., & Tu, P. (2014). Health Economics. Palgrave Macmillan.

**Reference Books:**

1. Coelli, T. J., Rao, D. S. P., O'Donnell, C. J., & Battese, G. E. (2005). An introduction to efficiency and productivity analysis., Springer science & business media.
2. Morris, S., Devlin, N., Parkin, D., & Spencer, A. (2012). Economic Analysis in Health Care (2nd ed.). Wiley.

## Course: Financial Economics

Semester: IV

Paper Code: MEM23627T

**Total sessions: 60**

**Total Credit: 04(four)**

**L-T-P: 4-0-0**

### Course Objective:

The course objectives are -

1. To explore various financial instruments, such as stocks, bonds, derivatives, and their characteristics, risks, and uses in financial markets.
2. To identify and evaluate methods of risk management in finance, including hedging techniques and the use of derivatives.
3. To understand the role of regulatory bodies and the impact of regulations on financial markets and institutions.

### Course Outcome:

After the study of the course, the students will be able to

CO1: **Explain** the relationship between risk and return in financial decision-making.

CO2: **Identify** different financial market structures and their impact on economic outcomes.

CO3: **Analyze** the key principles of behavioral finance and be able to recognize market anomalies and investor biases that can affect financial decision-making.

CO4: **Evaluate** the different factors affecting the factor prices as well as the available stock evaluation methods.

### Syllabus:

Unit No.	Content	Hours
1.	<b>Financial Regulations and Financial Sector Reforms</b> Money Market regulations – Banking sector reforms – quarterly credit policy of RBI - Capital market regulations of SEBI- Legal issues in security trading - FERA & FEMA - Capital account convertibility; International regulatory framework.	12

2	<b>Stock Evaluations &amp; Stock Evaluation Methods</b> - Fundamental vs. Technical analysis - Factors affecting stock prices - Economic factors - Market related factors - Firm specific factors - Indicators of future stock prices	10
3	<b>Stock Risk &amp; Return Analysis:</b> Measures of risk - Risk and return framework and investment decisions - Methods of determining maximum expected loss	8
4	<b>Derivative Securities Market:</b> Financial future market: Valuation of financial futures - Option market - Speculation with option market – Hedging - Arbitrage and foreign exchange futures market.	10

**Books Recommended:**

1. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5th edition, 2011.
2. Hull, John C., Options, Futures and Other Derivatives, Pearson Education, 6th edition, 2005.
3. David G. Luenberger, Investment Science, Oxford University Press, USA, 1997.
4. Thomas E. Copeland, J. Fred Weston and KuldeepShastri, Financial Theory and Corporate Policy, Prentice Hall, 4th edition, 2003.
5. Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance, McGrawHill, 7th edition, 2002.
6. Stephen A. Ross, Randolph W. Westerfield and Bradford D. Jordan, Fundamentals of Corporate Finance.McGraw-Hill, 7th edition, 20

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