UNIVERSITY OF KERALA

Department of Demography

M.Sc. Programme in Demography

CREDIT AND SEMESTER SYSTEM

2013

MSc Programme in Demography

Introduction

The Master of Science in Demography is a two year programme consisting of four semesters under the Credit and Semester System (CSS). The course aims to equip the students with a comprehensive understanding of the techniques and tools of demographic analysis and to provide analytical skills on Demography and Biostatistics coupled with a thorough knowledge about the past, present and future population scenario of the world and India, the various demographic events and processes that shape the population size and structure, various factors affecting population and its determinants. Demography has got a very close relation with various other disciplines such as Sociology, Economics, Statistics, Public Health, environmental sciences and Geography. During the programme, the students undergo sufficient training to comprehend these relationships.

The programme has got four semesters and a minimum of 72 credits need to be completed to pass the course. The Department offers 60 core credits in four semesters and the students need to complete at least 12 credits through the various elective courses offered by the Department of Demography and various other Departments in the University of Kerala.

Eligibility for Admission

There are a total of 12 seats for the MSc Demography programme in the Department of Demography. Eight of the 12 seats are filled from students who completed the BSc programme in Mathematics or Statistics. The remaining four seats are filled from those who have completed the Bachelors programme in Sociology, Economics, Geography, etc. with a precondition that they must have studied Mathematics/ Statistics as a subject either in the bachelors programme or at the higher secondary level. Reservation criteria as laid down by the University of Kerala will be followed while admitting students.
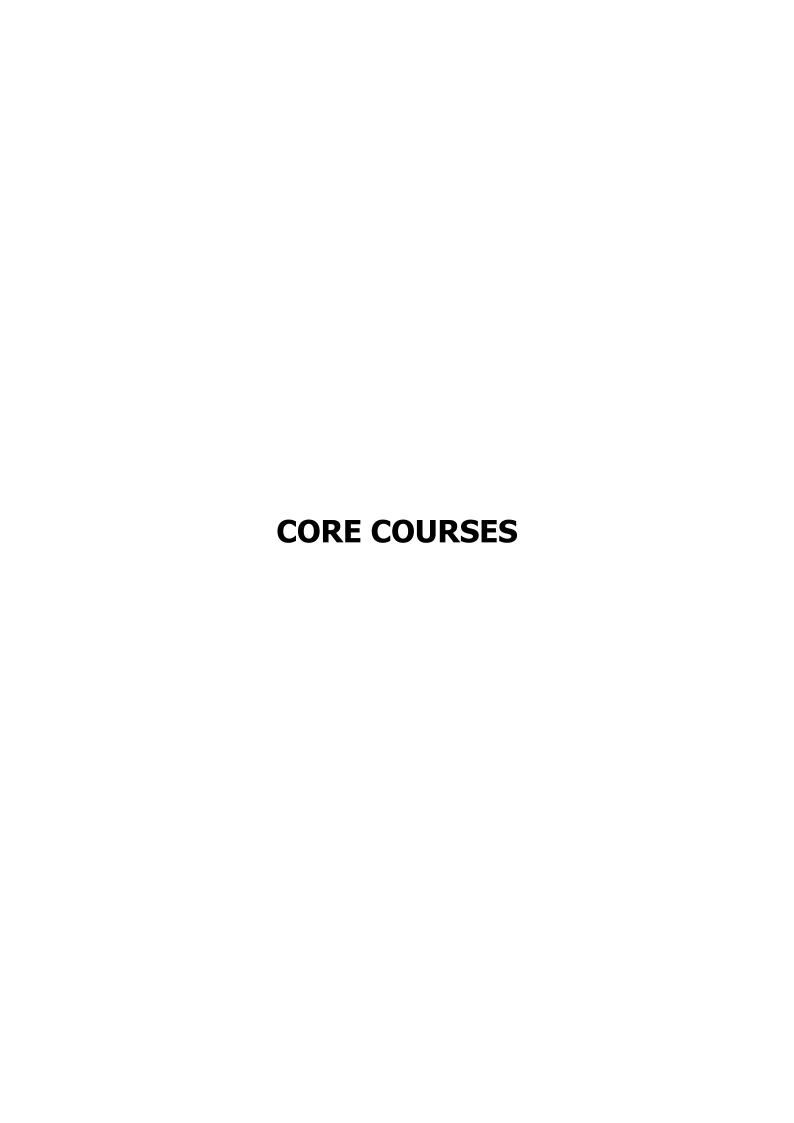
Topics covered in the Programme

There are 14 courses on various aspects of Demography under the core courses. The students are also required to complete a dissertation consisting of 6 credits by doing a project work on a topic of their interest. The various topics covered include Biostatistics, techniques of demographic analysis, population education, public health, research methodology, population and development, indirect estimation, etc. A detailed description of the courses offered during the MSc programme is detailed in the following sections.

DEPARTMENT OF DEMOGRAPHY
M.Sc. Demography Programme (2013 admission onwards)

CORE COURSES				
Course No.	Course Title	Number of Hours		
		L	T	C
DEM 511	Introduction to Demography	4	1	4
DEM 512	Demographic Theories	4	1	4
DEM 513	Techniques of Demographic Analysis – I	4	1	4
DEM 514	Biostatistics I	4	1	4
DEM 521	Techniques of Demographic Analysis – II	4	1	4
DEM 522	Population Policies, ProgrammeManagement & Evaluation	4	1	4
DEM 523	Population & public Health	4	1	4
DEM 524	Research Methodology & ComputerApplications	4	1	4
DEM 531	Human Ecology	4	1	4
DEM 532	Biostatistics II	4	1	4
DEM 533	Community Outreach Activity	4	1	4
DEM 541	Population Models and IndirectEstimation Techniques	4	1	4
DEM 542	Population and Development	4	1	4
DEM 543	Population Education	2	1	2
DEM 544	Dissertation	6	-	6

ELECTIVE COURSES				
DEM 501	Population Sociology	2	1	2
DEM 502	Gender Issues	1	1	2
DEM 503	Actuarial Science	2	1	2
DEM 504	Population Genetics	2	1	2
DEM 505	Kerala's Demography	2	1	2
DEM 506	Business Demography	2	1	2
DEM 507	Population Geography	2	1	2
DEM 508	Population Ageing	2	1	2
DEM 509	Field Study Report	2	1	2
DEM 510	Reproductive & Child Health	2	1	2

DETAILED SYLLABUS

CORE COURSES

Course Code: DEM 511
Course Title: Introduction to Demography
Course Credit: 4
Semester: I
Prerequisites: There are no prerequisites for this course

Aim of the Course: The overall aim of the course is to introduce the subject of Demography to the participants. Students will become familiar with basic concepts and sources of data in Demography and also will be able to comprehend the processes and events in Demography and their interactions. The course also tries to discuss the various factors affecting population growth and its proximate determinants.

Learning Objectives: At the end of the course, the students would be able to
- comprehend the basic concepts and definitions in Demography
- identify the various sources of data in Demography
- describe the population growth scenario of the world, India and its states
- Relate the history of population growth to the present day structure and composition of population

Course Description: This four credit course is an introductory course in Demography and provides the basic information required to build on further through the course. It provides the definition and scope of Demography, the data requirements in Demography and sources of data are discussed in great detail. The various demographic events that play important role in population growth and composition are also discussed. Historical perspectives of the changes in population and of the demographic events are also included in this course.

Course content:

Module 1	The development of the subject-Present day concept-Definitions-Origin and Scope of Demography
Module 2	Demography and other sciences – Mathematics, Economics, Sociology, Anthropology, Psychology, Public health and Biological Sciences
Module 3	Sources of Demographic Data-Census, Vital Registration System, Population Register and Sample Surveys
Module 4	Population composition-Age, Sex, Religion, Caste, Education, Language, Income
Module 5	History of population growth-Primitive Society, Pre-Industrial Society, Developing and Developed Societies, World Population

Module 6	Population Scenario of India-History of population growth-Population size and growth in states
Module 7	Components of population change-Fertility, Mortality and Migration, Causes and consequences of change
Module 8	Migration and Urbanisation – Types of migration, factors affecting migration, causes and consequences of urbanization
Module 9	Marriage and Family – Concepts and definitions, changes in household size, trends and differentials in age at marriage

Assessment Plan

No.	Assessment	Marks assigned
1	Continuous Assessment	40
	Class participation	5
	Assignments	10
	Mid semester exam	15
	Test/Seminar/Quiz	10
2	End semester Assessment*	60
	TOTAL	**100**

*End semester assessment is written examination consisting of five 12 marks questions with options.

References:
Bose, Ashish: India's urbanization 1901 – 2001 – 2nd Ed New Delhi, Tata McGraw Hill, 1978
Bougue, Donald J: Principles of demography – New York: John Wiley and Sons, 1969
Bhende, Asha A and Tara Kanitkar: Principles of population studies – 5th rev. ed. Delhi: Himalaya, 12997
Davis, Kingsley: The population of India and Pakistan – New Jersey; Princeton, 1951
Hauser, Philip M and Otis Dudley Ducan, Ed: The study of population: an inventory and appraisal – Chicago: University of Chicago Press, 1951
Misra.B.D.: An Introduction to the study of population – New Delhi : South Asian, 1981
Population growth in Kerala; Its implications – Trivandrum – Govt. Press, 1986
PrakasaRaoVLS : Urbanisation in India : Spatial Dimensions – New Delhi : Concept, 1983
Ramakumar.R and Gopal Y S: Technical demography – New Delhi: Wiley Eastern, 1986
Shrivastava O S: A text book of demography with economics of man power supply and manpower demand, New Delhi: Vikas, 1983
Sinha and Zachariah: Elements of Demography
Thompson, Warrens and David T Wewis: Population Problem – 5th ed – New

Delhi: Tata McGraw Hill, 1965

United Nations: Determinants and consequences of Population trends, New York, United Nations

United Nations: World Population monitoring – New York UN, 1990

United Nations: World Population Policies – 3 v. New York, United Nations, 1989

United Nations: World Population trends and policies – Monitoring report – New York: United Nations, 1979

United Nations: Economic and social aspects of population aging in Kerala, India – New York: United Nations, 1992

Zacharia K C: The anomaly of the fertility decline in India's Kerala State – Washington. The World Bank, 1984 KURUP R S and K A George Ed

Course Code: DEM 512
Course Title: Demographic Theories
Course Credit: 4
Semester: I
Prerequisites: There are no prerequisites for this course

Aim of the Course: The aim of this course is to introduce the students to the general theories of population, including theories of fertility, fecundity, marriage, mortality, and migration. Theories of population growth and replacement, economical and social distribution as well as population classification of population will also be discussed. This course covers the development of population studies into a proper historical science. General theories of population help to explain the reason for population growth and replacement and the effect that these changes have on both economical and social distribution.

Course Description: Fertility, fecundity, marriage, mortality, and migration are fundamental elements in the study of historical demography. These basic demographic elements have been behind the principle demographic theories. The size and growth of population has been viewed as an important factor underlying the development of any country. It is therefore worthwhile to trace the development in the thinking of scholars and the different points of views expressed by them with respect to population phenomena within the socio-economic-political context.

Course Content:

Module 1   Pre-Malthusian Theories of Population, Malthusian theory
Module 2   Post-Malthusian Theories – Theories of Classical School of Political Economy
Module 3   Socialist's views on population, Marxian theories-Demographic Transition Theory
Module 4   Optimum Population theory, Stable Population Theory, Biological Theories
Module 5   Economic Theories of fertility : Easterlin, Leibenstein, Caldwell, Becker- Social Theories of fertility : Freedman Davis- Blake Model
Module 6   Theories of Migration :RavensteinStonffer, Ziffe, Lee's theory and its modification, Michal Todaro, Theories of Urban Growth.

Assessment Plan

No	Assessment	Marks Assigned
1	Continuous Assessment	40
	Class Participation	5
	Assignments*	10
	Mid Semester Exam**	15
	Test/Seminar/Quiz***	10
2	End Semester Assessment****	60
	TOTAL	**100**

Note : *Two to four assignments are given and take the average

** Maximum marks out of 30 and taking it's half. Both Multiple choice and Essay questions, out of five answer any three.

***Test/Quize has multiple choice questions and seminars may be power point presentations

****End semester exam will be out of 60 Marks. It contains Short answer type Questions and Essays. Answer any five out of eight questions

References:

PrakasaRao, VLS, Urbanization in India: Spatial Dimensions – New Delhi concept, 1983

United Nations: Determinants and consequences of population trends – New York, United Nations

Bogue, Donald, Principles of Demography – New York: John Viley and Sons, 1969

Shrivastava O S A text book of Demography with economics of man power supply and man power demand – New Delhi: Vikas, 1983

Bhende, Asha and Tara Kanitkar, Principles of Population Studies – 5th Nov. ed. New Delhi, Himalaya, 1992

Thompson, Warrens and David T Lewis, Population problems – 5th ed-New Delhi : Tata NcGraw Hill, 1965

Sinha and Zachariah, Elements of Demography

United Nations, Determinants and consequences of population trends – New York United Nations

Ghosh B N Population Theories and demographic analysis – New Delhi :Meenakshi

Freedman, Ronald – The Sociology of Human Fertility: a trend report and Bibliography – in Sociology of Law/ed. By Kingsley Davis – London: London School of Economics and Political Science, 1962

United Nations – Population of India – New York: United Nations, 1982

Thompson, Warren S – Population Problems 4th ed – London :McGraw Hill, 1953

Wilson, Robert A and David A Schulz – Urban Sociology – New Jersey : Prentice Hall, 1978

Ghosh B N – Fundamentals of Population Geography – New Delhi : Sterling, 1985

JACKSON J A ED Migration – Cambridge: at the University Press, 1969

Krishnakumari K: internal Migration: its dependence upon Heterogeneity of Population composition – Ph.D. thesis – Kariavattom: Dept. of Statistics, University of Kerala, 1978

International Encyclopedia of the Social Sciences – 17 v. New York : Mac Millan, 1968

Course Code: DEM 513
Title of the course: Techniques of Demographic Analysis – I
Course Credit: 4
Semester: I
Prerequisites: There are no prerequisites for this course

Aim of the course: The aim of the course is to upto date knowledge of available tools for analyzing demographic data obtained from surveys, census and vital registration systems. This course helps to understand all the mathematical procedures that measure population change and its underlying factors and help in visualizing the future prospects of population growth.

Course Description: Techniques for measuring population structure, growth and distribution are explained as spatial distribution of population and growth are the important aspects of population and indicate the areal differences in economic development. Helps to have knowledge about sources of demographic data, quality of data and adjustments. Basic measures of fertility and reproduction are explained inorder to understand the population dynamics and human reproduction process for the effectiveness of population control programmes and their evaluation. Different measures of nuptiality and techniques for analyzing the marital data in understanding the process of marriage and its dissolution. Migration which forms as an important component of population growth.

Course Content:

Module 1	Introduction : Concepts and Definitions of terms, fertility, mortality, Nuptiality, Migration
Module 2	Structure of Population: Measures of Age and Sex Composition of the Population. Age pyramid, Quality of Age data, Errors in demographic data – Whipple's Index, Myer's Index, UN Joint Score Index.
Module 3	Sources of data – Census, Vital Statistics, Sample Surveys, Population registers, Quality of Data – Evaluation and Adjustment of Demographic Data Interpolation and Graduation
Module 4	Population Growth : Measures of Population growth – Balancing Equation, Arithmetic, Geometric, Exponential, Logistic. Doubling Time
Module 5	Rates and Ratios – Person years lived, Crude and Specific Rates, Standardization – Direct and Indirect Methods : Components of Rates
Module 6	Mortality Measures – Introduction, Crude and Specific Rates, Standardised Rates Infant Mortality – Infant Mortality Rate, Neo-natal mortality rate, Post neonatal mortality, Peri natal mortality, Foetal Death,. Morbidity: Prevalence and Incidence Rates, Maternal Mortality

Module 7	Fertility Measures :Introduction, Concepts, Types of Analysis: Period and Cohort Measures - Crude and Specific Rates, Standardised Rates Coale's Fertility indices – Total Fertility Rate, Gross Reproduction Rates, Net Reproduction Rate, Replacement Index
Module 8	Measures of Nuptiality – Introduction, Crude Marriage rate, General Marriage rate, Age – Specific Marriage rate , Total Marriage rate, Mean Age at Marriage, Singulate Mean Age at Marriage
Module 9	Migration and Urbanization :Introduction and Concepts, Measures of Migration, Measures of Urbanisation : Degree, Tempo and Concentration, Population and Distribution. Centrality and Hierarchy
Module 10	Labour Force : Measures of Dependency – Age and Economic – Work Participation Rates

Assessment Details

No	Assessment	Marks Assigned
1	Continuous Assessment	40
	Class Participation	5
	Assignments	10
	Mid Semester Exam	15
	Test/Seminar/Quiz	10
2	End Semester Assessment*	60
	TOTAL	**100**

*attend 5 questions out of 7 questions.

References

Barclay G W Techniques of Popualation Analysis, New York, John Wiley and Sons, Inc

Hinde, Andrew Demographic Methds.London,1998

Jaffe A J Hand Book of Statistical Methods for Demographers, Washington, US Govt. Printing Office

MISRA B D An Introduction to the Study of Population, Madras, Publishing

Athak, K.B.& F.RAM Techniques of Demographic Analysis, Mumbay, Himalaya Publishing house.

Pollard J H Demographic Techniques Australia, Pengamon Press

Preston, Samuel H, Patrick Heuveline and Michel Guillot: Demography – Measuring and Modeling Population Processes

Ramakumar R Technical Demography, New Delhi, Wiley Eastern Ltd.

Shryock, Henry S, Jacob S Seigel and Associates, The Methods and Materials of Demography Vol. 1 & 2, Washington DC US Bureau of the Census

SPEEGELMAN M Introduction to Demography Cambridge, Harvard University Press

Srinivasan K Basic Demographic Techniques and Applications, New Delhi Sage Publications

Course Code: DEM 514
Course Title: Biostatistics I
Course Credit:4
Semester: I
Prerequisites: There are no prerequisites for this course

Aim of the Course: This course aims to provide the student with basic skills in biostatistics and common applications of biostatistics in demographic and public health research.

Course Objectives: Upon completion of this course, students will be able to:
- o describe and define biostatistics its background and applications e
- o explain, calculate, and interpret descriptive statistics including scales of measurement, frequency distributions, measures of central tendency, measures of dispersion, standard scores, and the normal curve.
- o illustrate matrix theory and various operations of matrices
- o describe the basic concepts of inferential statistics including probability, confidence intervals, and hypothesis testing.
- o Explain various standard distributions in statistics, sampling methods, analysis of variance, correlation and regression

Course Description: This basic course on Biostatistics provides the student an introduction to selected important topics in biostatistical concepts and reasoning. Specific topics include tools for describing central tendency and variability in data; matrix and probability and standard distributions, methods for performing inference on population means and proportions via sample data; statistical hypothesis testing and its application to group comparisons, random sample and other study types. While there are some computational elements to the course, the emphasis is on interpretation and concepts.

Course Content

Module 1	Definitions, Uses, Applications and implications, Mathematical background for Biostatistics
Module 2	Matrix theory: Rank of a matrix, elementary operations, Inverse of a matrix, Eigen values, Permutation and Combination
Module 3	Univariate Descriptive Statistics-Variables, Types of variables, Frequency distribution and graphic representation, Measures of central tendency and dispersion.
Module 4	Probability-Meaning basic concepts, a priori Probabilities, Addition theorem, Multiplication theorem, Conditional probability, Bayes Theorem
Module 5	Standard Distributions- Uniform distribution-(discrete& continuous) Binomial, Poisson and Normal distribution

Module 6	Sampling- Probability and Non-Probability Sampling, different sampling methods, Design effect. Small sample test- Student's- t distribution, chi- square test, F-test
Module 7	Analysis of Variance-One way classification Two way classification
Module 8	Correlation and Regression – Relation between variables, Curve fitting and Principle of test squares, two regression lines, Angle between regression lines, Pearson coefficient of correlation, Rank Correlation Coefficient, testing of Correlation Coefficient
Module 9	Analysis of Time Series- Introduction, Meaning, Uses, Components of Time Series, Measurements of trend, various methods

Assessment Plan

No.	Assessment	Marks assigned
1	Continuous Assessment	40
	Class participation	5
	Assignments	10
	Mid semester exam	15
	Test/Seminar/Quiz	10
2	End semester Assessment*	60
	TOTAL	**100**

*End semester assessment is written examination consisting of five 12 marks questions with options.

References:

Maxwell A E, Basic Statistics for Medical and Social Science Students: Ahalsted Press Book, New York

Agarwal B L, basic Statistics – Third edition: New Age International (P) Ltd. Publishers, New Delhi

Stoodley K D C, T Lewis, CLS Stainton Applied Statistical Techniques Ellis Horwood Ltd. Publishers

Willfred J Dixon, Frank J Massey Jr Introduction to Statistiscal Analysis – Fourth Edition Mc. Graw Hill International Book Company, Tokyo

Theodore R Anderson, Morris ZeldiitchJr.Holt, Rinerhart and Winston, A basic course in Statistics with Sociological Applications, Second Edition USA

Sidney Siegel, N John Castellan Jr, Nonparmetric Statistics for the Behavioural Sciences: McGraw – Hill Book Company, Singapore

Kirk W Elifson, Richard P Runyon, Audrey Haber, Fundamentals of Social Sciences – Second Edition: McGraw Hill Book Company, Singapore

Ian F Blake John, An Introduction to Applied Probability Wiley and Sons, New York

Norma Gilbert, Statistics – Second Edition: Saunders College Publishing, Japan

J Susan Milton, Paul M Mctee, James J Corbert, Introduction to Statistics: McGraw Hill International Book Company, North America

Patrick Brocket Arnold Levine, Statistics and Probability and their applications: Saunders College Publishing, USA

Mark L Berelson, David M Levine, David Rindskof, Applied Statistiscs – A First Course: Prentice Hall International Edition, USA

Kapoor S K, Elementals of Practical Statistics – Second Edition: Oxford and IBH Publishing Company, New Delhi

Gupta S C, Fundamentals of Statistics: Himalaya Publishing House, Bombay

Course Code: DEM 521
Course Title: Techniques of Demographic Analysis – II
Course Credit: 4
Semester: II
Prerequisites: There are no prerequisites for this course

Aim of the course: The aim of the course is to upto date knowledge of available tools for analyzing demographic data obtained from surveys, census and vital registration systems. This course helps to understand all the mathematical procedures that measure population change and its underlying factors and help in visualizing the future prospects of population growth.

Course Description: Techniques for measuring longevity – Life Tables, Population projections which deals with computations of future population size and their characteristics based on a knowledge of the past trends and realistic assumptions about the future trends in the components of its change – fertility, mortality and migration, which is required for the development planning process.

Course Content:

Module1	Life Table : Concepts, Assumptions, Construction of Life tables- Complete and Abridged -.Various types – Force of Mortality, Uses of Life Tables. Single Decrement Associated Life tables
Module2	Multiple Decrement Life table – Multi State Life table, Applications Nuptiality Tables, Contraceptive Effectiveness. Working Life Tables
Module3	Structure of Population – Stable, Quasi-stable, Stationary Population, Lotka's Stable Population Theory, Applications – Population Momentums, Reproductive value
Module4	Population Estimation and Projections – Methods of Population estimation and Projection – Mathematical and Cohort Component methods, Assumptions, on fertility, Mortality and Migration
Module5	Sub-National Population Projections – Various Methods, URDG, Projection of Labour Force, Educational Population

Assessment Details

No	Assessment	Marks Assigned
1	Continuous Assessment	40
	Class Participation	5
	Assignments	10
	Mid Semester Exam	15
	Test/Seminar/Quiz	10

| 2 | End Semester Assessment | 60 |
| | **TOTAL** | **100** |

References

Coale A J, The Growth and Structure and Human Population – A Mathematical Investigation : Princeton Univ. Press, Princeton

Coale A J &Demeny P: Regional Model Life Table and Stable Population : Princeton Univ. Press, Princeton

Frejka James, Future of Population Growth: Alternate Paths to Equilibrium: John Wiley and Sons, Inc. N.York

Henry, Louis, Population Analysis and Model: London, Edward Arnold

Hinde Andrew, Demographic Methods: London, Arnold

Keyfitz N, Introduction to the Mathematics of Population London, Wesley

Keyfitz N, Applied Mathematical Demography John Wiley and Sons

KrishsnanNamboodiri&Suchindran C M, Life Table Techniques and their Applications Florida, Academic Press

Land Ckenneth& Rogers Andri, Multidimensional Mathematical Demography New York, Academic Press

Pathak K B & F Ram, Techniques of demographic Analysis, New Delhi, Himalaya Publishing House

Pittenger B Donald , Projecting State and Local Population Cambridge Battenger Publishing Company

Pollard J H, Mathematical Models for the Growth of Human Population, London Cambridge   Univ. Press

Preston Samuell H Patrick Heuveline& Michel Guillot, Demography Measuring & Modeling Population Processes Oxford, Blackwell

Ramakumar R, Technical Demography, New Delhi, Wikey Eastern Ltd.

Shryock H S et al, The Methods and Materials of Demography, New York, Academic Press

United Nations, Manual III Methods for Population Projection by Sex and Age: New York

United Nations, Methods of Analysing Census Data on Economic Activities of the Population, New York

Course Code: DEM 522
Course Title: Population Policies, Programme Management and Evaluation
Course Credit: 4
Semester: II
Prerequisites: There are no prerequisites for this course

Aim of the Course: The course will provide a framework for developing and analyzing a range of population policy issues. The aim of the course is to provide the students with a comprehensive understanding of the various types of population policies introduced by governments through a historical perspective and of the tools for evaluation of population and health policies.

Course Description: Population policy of a country shapes the principles, objectives and policies adopted by it with regard to population for the purpose of influencing the structure of population, including population growth and its main determinants (fertility, mortality, migration, age-sex composition). Population policy forms a large umbrella policy covering all programs and activities directly and indirectly influencing population variables. This course covers the basic elements of population policies, policies adopted by various countries in the developed and developing world and a historical perspective of India's population policy. The influence of international agencies on the policy formulation of countries is discussed and introduces the tools for evaluating population policies and programmes.

Course Content:

Module 1	Population Policy, Definitions, Policy goals and Types of policies
Module 2	Overview of population policy in; Developed and Developing countries
Module 3	History of Population Policy in India. Population Policy Goals and Five Year Plans, New Population Policy of India
Module 4	Role of UN and other International Agencies. World Population Conferences – Bucharest, Mexico, Cairo Conferences – Bucharest, Mexico, Cairo
Module 5	Demographic data for population policies, Service statistics, KAP Surveys, Fertility Surveys, National Family Health Surveys-Quality of service statistics
Module 6	National Health and Family Planning Programme in India- History, MCH Programmes, Reproductive and Child Health Programmes, Target free Approach
Module 7	Evaluation of population policy programmes, Indicators of evaluation, Evaluation on ethical ground
Module 8	Demographic evaluation of Family Planning Programme

Assessment Details

No	Assessment		Marks Assigned
1	Continuous Assessment		40
	Class Participation		5
	Assignments		10
	Mid Semester Exam		15
	Test/Seminar/Quiz		10
2	End Semester Assessment		60
	TOTAL		**100**

References

David I Sills Ed., International Encyclopaedia of the Social Sciences Vol.11and 12- New York, Macmillan,1968.

Veatch, Robert M.Ed. Population Policy and Ethics. The American experience: New York. Livington Publishers, 1977

United Nations World Population Policies, 3 vol New York:UN, 1987

Bhende, Asha A and Tara Karthikar Principles of Population Studies – 5th ed.

Thompson, Warren S, Population problems : New York, MC Graw Hill, 1953

Shryock, Henry S et. al., The methods and materials demography: New York : Academic Press, 1976

Berelson, Bernard, Ed.: Population Policy in Developed Countries: New York MC Graw Hill, 1974

India, Government of National Population Policy 2000, New Delhi: Dept. of Family Welfare

United Nations, World population Trend and Policies: 1987 monitory report Fertility and Womens Life cycle and Socio Economic differentials in mortality, New York, UN, 1988

United Nations: World Population trend and policies: Monitoring Repots, 1977 reports, 1981 reports: New York: UN

Bogue, Donald J: Principles of Demography, New York, John Wiley and sons 1969

United Nations: Determinants and consequences of Population trends – New York, UN, 1953

Misra BD, Introduction to the study of population trends – New York, UN, 1953

United Nations: The methodology of measuring the impact of family planning programmes on fertility – New York, United Nations, 1979

United Nations : Evaluation of the impact of family planning programme on fertility: Sources of variance, New York:UN, 1983

Kiser: Research in Family Planning

Other resources: Family Welfare Year Books, Family Planning News, Population Headlines, CDS working papers

Course Code: DEM 523
Course Title: Population and Public Health
Course Credits: 4
Semester: II
Prerequisites: There are no prerequisites

Aim: The aim of the course is to impart knowledge on health, public health, Environment, reproductive and child health

Course Description: This course contains definition of health, epidemiology, morbidity, health and environment, health economics, reproductive health and nutrition.

Course Content:

Module 1	Concepts of health and diseases- definition of health, physical development, indices of physical development.
Module 2	Morbidity patterns of developing and developed countries, communicable and non –communicable diseases- Trends and patterns in India and Kerala, Morbidity and mortality link- Epidemiological and demographic Transition.
Module 3	Health and Development- social determinants of of health , inter linkages between health and Development at local and national levels, globalization and poverty, impact of development Policies on health, Health equity.
Module 4	Health and environment- Population, Environment and ecosystem Environmental Health Issues, Prevention and Control of Environmental Occupational health issue-Food safety, food contamination-Waste management, POET variables- Population, Organisation, Environment and Technology.
Module 5	Basic Health Economics- Demand for health, Supply of Health and Health Care Cost, Health insurance, Markets.
Module 6	Health Programmes and Health Care Systems in India – National Health Programmes- health care systems functioning in different states, organizations and institutions – Gaps and probable solutions.
Module 7	Reproductive physiology- the male and female reproductive systems, Menstrual cycle, fertilization, conception and gestation, fecundity and sterility, conception control, contraceptive methods , Medical Termination of pregnancy [MTP]
Module8	Reproductive Health, Definition, General concepts, Maternal and child health, Prenatal and Antenatal care, sanitation, Hygiene, Reproductive Rights, STD,RTI,HIV/AIDS, Male involvement in Reproductive health- Indian Scenario.
Module 9	Nutrition-Nutrients Functions and Sources, Nutritional deficiency diseases, Nutritional requirement of special groups- Pregnant and

lactating women and infants and children- Nutrition Survey, Nutritional Tables-Nutritional situation in India (NFHS-1,2,3) Anemia.

Assessment Details

No	Assessment	Marks Assigned
1	Continuous Assessment	40
	Class Participation	5
	Assignments	10
	Mid Semester Exam	15
	Test/Seminar/Quiz	10
2	End Semester Assessment	60
	TOTAL	**100**

References

J E Park and K Park, Textbook of Preventive and Social Medicine

Kleinbaum D G; Kupper L L& Morgenstern H (1982) : "Epidemiologic Research – Principles and Quantitative Methods". A Van Nostrand Reinhold Book, New York

Charles H Hennekens and Julie E Burning (1987), 'Epidemiology in medicine' edited by Sherry L Meyrent; Little, Brown and Company

W W Daniel (1974), Biostatistics: A foundation analysis in the Health Sciences, John Wiley and Sons, Inc. New York

Monica Das Gupta, L C Chen and T N Krishnan (Editors) "Epidemiologic and morbidity transition" in the book Health, Poverty and Development in India

Shyvin S Mader, 'Human Biology' Win C Brown Publishers

WHO (1971) International Health Regulations

Chatterji K D (1952), Human Parasites and Parasitic Diseases, Calcutta

Kark S L (1974), Epidemiology and Community Medicine

ICMR and ICSSR (1981) Health for All : An Alternative Strategy, Indian Institute of Education, Pune.

Course Code: DEM 524
Course Title: Research Methodology and Computer Application
Course Credit: 4
Semester: II

Aim of the Course: This course is a general introduction to social research methods and will cover broad topics: the foundations of social science research, research design, data collection, and data analysis and report writing. This module aims to provide students with an understanding of the principles and skills needed in order to design and conduct research. It will encourage students to critically evaluate the methods, strategies and data that used by social scientists and provide training in analysis of a range qualitative and quantitative data. By the end of the course, the students should be able to:

- To develop understanding of the basic framework of research process.
- To develop an understanding of various research designs and techniques.
- To identify various sources of information for literature review and data collection.
- Formulate good research questions and design appropriate research.
- Collect their own data using a variety of methods.
- Analyze both qualitative and quantitative data using computer-based skills.
- Critically evaluate their own research and that of other social scientists.

Course Description: The module will be taught using a combination of Lectures and lab works. Students will have opportunities to learn by doing in all aspects of the course—in class lectures, the computer lab, and out-of-class assignments. In the lab, we will focus on learning computer-based data analysis with SPSS, a widely used statistical software package. The lab sessions offer an opportunity to reinforce class lessons and to acquire a set of very useful, marketable skills.

Course Content:

Module 1	Social Research, Scope of Social Research, Development of Research Methodology- Nature and Importance of research, aims of social research, research process, pure research vs. applied research, qualitative research vs quantitative research, exploratory research, descriptive research and experimental research
Module 2	Basic themes of research, Units of Analysis, variables, relations, hypothesis
Module 3	Stages of research process
Module 4	Conceptual and Operational Definitions Theory and Models – empirical Research
Module 5	Research Design- Meaning of Research Design. Functions and goals of Research Design, characteristics, phases, design for different

	types of research, pilot study
Module 6	Measurement- concepts, attitude measurement, Nature and Levels of measurement and types of scales. Criteria for good measurement - Validity and Reliability Sampling- Sampling design and sampling procedures. Probability Vs. Non-probability sampling techniques, determination of sample size
Module 7	Methods of Data Collection - Discussion on primary data and secondary data, tools and techniques of collecting data. Observational, Survey Research, Qualitative, Secondary data analysis
Module 8	Questionnaire Construction and Interviewing Case Studies-Content Analysis-Data processing and Analyses- Coding, Tabulation.
Module 9	Analysis Methods- Editing and coding, transform raw data into information, basic data analysis, descriptive statistics Univariate, Bivariate, Multivariate. Path Analysis, Factor Analysis, Descriminant Analysis, Index Construction and Scaling Techniques Computer Software for Multivariate Analysis – Introduction, application & Practical
Module 10	Interpretation and Report Writing, Bibliography, Citation

Assessment Plan

No	Assessment	Marks Assigned
1	Continuous Assessment	40
	Class Participation	5
	Assignments*	10
	Mid Semester Exam**	15
	Test/Seminar/Quiz***	10
2	End Semester Assessment****	60
	TOTAL	**100**

Note : *Two to four assignments are given and take the average

** Maximum marks out of 30 and taking it's half. Both Multiple choice and Essay questions, out of five answer any three.

***Test/Quize has multiple choice questions and seminars may be power point presentations

****End semester exam will be out of 60 Marks. It contains Short answer type Questions and Essays. Answer any five out of eight questions

References:
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Desai P B, A survey of research in Demography, Mumbai, Popular Prakashan
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Julian L Simon, Basic Research Methods in Social Science –The Art of Empirical Investigation, New York, Random House

Kenneth D Bailey, Methods of Social Research, New York, Macmillon Publishing Company. Inc.

Kothari C R, Research Methodology Methods and Techniques, New Delhi, WishwaPrakashan

Nachmias David &ChavaNachmias, Research Methods in the Social Sciences, New York, St.Martin's Press

Therese L Baker Doing Social Research, New York, Mc. GRAW HILL

Wilkinson T S & P L BHANDRKAR Methodology and Techniques of Social research Mumbai, Himalaya Publishing House

Course Code: DEM 531
Course Title: Human Ecology
Course Credit: 4
Semester: III

Aim of the Course: This course is intended to give post graduate students a deep understanding of large scale patterns and processes in human ecology. This course aims to develop the ability to think critically about how and why our direct relations to natural environment as well as our social relations with regards to the environment have dramatically change over the last fifty years; and how this changes affects the sustainability of our living environment and civilization.

The specific objectives: After completing Human Ecology, the student should be able to:

- o Define ecology and some of its basic principles, such as the life support systems of the planet, functions of ecosystems, food webs, biological diversity, biogeochemical cycles, biological magnification and the greenhouse effect.
- o Distinguish among herbivory, carnivory, omnivory, and Symbioses: Parasitism and Mutualism etc.
- o Increase the awareness of environmental issues and the different ways of looking at them.
- o Understands key human ecology concepts to help develop an informed understanding of important environmental issues, including sustainability challenges.

- o Explain the theories on land use patterns and urbanization.

Course description: Human, or cultural, ecology is an important conceptual paradigm for analyzing and understanding human environmental relations. In very general terms, it is the study of the adaptive processes by which the nature of society is affected by these responsive adjustments to utilize a given environment. This course examines the relationship of humans to their biological environment. Strong emphasis is placed on the damage the planet is incurring due to the activities of humankind and what needs to be accomplished to counteract environmental degradation. Human ecology also examines contemporary ecological concerns that result from population growth and industrial development.

Course Content

Module 1   Definition-Human Ecology _ The Earlier Concepts, Biotic community, Inter relationship between organisms, Human ecology versus Demography. Geographical distributions of Population

| Module 2 | Ecology and Eco system, Major procurement pattern, Human Ecological Organization |

| Module 3 | Adaptation – Types of Adaptation, Changing patterns of Adaptation, Adaptation of local areas |

| Module 4 | Balance – Ecological Balance and Imbalance, Theories of Balance, Perception and Adjustment to Imbalance |

| Module 5 | Population and Resources – types of Resources :- Physical, Biological and Human, Impact of Population Growth on Resources, World Population/Resource Regions |

| Module 6 | Population and Environment, Density and Carrying capacity, Population Growth and Density Changes |

| Module 7 | Environmental Degradation, Slums and urban Environment, Environmental Degradation and the poor, Women and Environment |

| Module 8 | Environmental problems, pollution, Agents of Pollution, Population and Environment Quality |

| Module 9 | Land Use, Urbanisation and its impact of Environment, Land use pattern theory |

| Module 10 | Environmental policy-Basic aspects of Environmental policy, International Environmental Policy, India's Environmental Policy, Industrial Location Policy-Law and Environmental Protection in India. |

Assessment Plan

No	Assessment	Marks Assigned
1	Continuous Assessment	40
	Class Participation	5
	Assignments *	10
	Mid Semester Exam**	15
	Test/Seminar/Quiz***	10
2	End Semester Assessment****	60
	TOTAL	**100**

*Two to four assignments are given and take the average

** Maximum marks out of 30 and taking it's half. Both Multiple choice and Essay questions, out of five answer any three.

***Test/Quiz has multiple choice questions and seminars may be power point presentations

****End semester exam will be out of 60 Marks. It contains Short answer type Questions and Essays. Answer any five out of eight questions

References

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Hawley, Amos H, Human Ecology, The Ronald Press Company, New York

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Berryman, Alan A, Population Systems, A general introduction

Singh Pramod, Ecology of Urban India, Asish Publishing House, New Delhi

Schomleo F, The Urban scene – Human Ecology and Demography – The Free Press, New York

Jackson J A, Migration, Cambridge University Press

Wilson, Robert A and David A Schulz, Urban Sciology, Prentice – Hall Inc.

Cohen Robin, The Cambridge Survey of World Migration, Cambridge University Press

Inikori J E ed., Forced Migration, Hutchinson University Library

Desai Anajan, Environmental Perception, the Huan factor in urban planning, Asish Publishing House

Bhende, Asha A and Tara Kanitkar, Principles of population Studies, Himalaya Publishing House

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DralalosDavod and Smith Ed, Urbanisation in the Developing World

LarconCahin J and Stan R Nikkel, Urban Problems – Perspective on Corporations, governments and Cities

Bijlani H U, Urban Problems – Indian Institute of Public Administration

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Clark WAV, Human Migration – London ; Sage, 1986

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ManzoorAlams S and Fatima Ali Khan Ed, – Perspectives on Urbanization and migration: India and USSR

Lewandowaski, Susan – Migration and Ethnicity in Urban India: Delhi: Manohar

Sivamurthy M – Growth and Structure of human population in the presence of migration – Sydney: Academic Press, 1982

Course Code: DEM 532
Course Title: Biostatistics - II
Course Credits: 4
Semester: III
Prerequisites: The students should have studied the course DEM 514 Biostatistics –I

Aim of the Course: This course aim to introduce some basic concepts of Bio-Statistics as well as Bio-statistical inferences. The contents range from description of statistical hypothesis, different test procedures to principles of epidemiology and its methods.

Course Description: One of the steps in the process of mutual education is to recognize that statistics is a composite domain, containing at least two distinctly different intellectual activities: (1) the acquisition, logical organization and numerical presentation of data, and (ii) the analysis of data to arrive at decisions on degrees of variation, interrelationship and differences. The first type of activity is often called "descriptive statistics" and the second type of activity is called as inferential statistics. These two types regularly enter into biostatistics, yet there is a drastic difference in the contents of the activities and performance of each of these. Biostatistics as science is being widely used not only to test all medical hypotheses and beliefs but also to assess the progress of health of a community. In this course we are interested in Human Biostatistics which deals with data and figures related to human life.

Course Content

Module 1   Historical development in Epidemiology: Principles of Epidemiology, Sources of data on morbidity, Definition

Module 2   Measurement of health and diseases, Incidence and prevalence rates of morbidity- Morbidity and Mortality link- Life expectancy, linking exposure and disease-relative risk-odds ratio- attributable risk.

Module 3   Epidemiological Methods –Analytical methods, Descriptive Methods- main types of study design-case studies, ecological studies, cross-sectional surveys, case control studies, cohort in following studies (chances, bias, confounding): association and causality

Module 4   Diagnostic Test Evaluation –Sensitivity, Specificity-Predictability

Module 5   Bi variate linear Regression, Non Linear Regression- Least Square line as a casual model- Regression model as a statistical model – statistical inference, goodness of fit

Module 6   Multiple Correlation and Regression-Multiple Regression with time

predictor variables, Multiple Regression with three or more predictor variables, Dummy variables, stepwise regression, correlation matrix, multi collinearity interaction, auto correlation Homoscedasticity. Multiple Classification Analysis, The basic MCA-unadjusted and adjusted values MCA with interactions

Module 7   Linear probability model, Logit regression model-Logistic function, Multivariate Logistic function and odds ratio, Statistical inference.

Module 8   Survival Models-I - Life Tables, Acturial Life Tables, Product Limit Life Table. Survival models-II- Proportional Hazard Model-Basic form, Baseline Hajnal function, Relative risk, Hajnal Regression Coefficient as measure of effect- Statistical inference, Goodness of Fit

Assessment Details

No	Assessment	Marks Assigned
1	Continuous Assessment	40
	Class Participation	5
	Assignments	10
	Mid Semester Exam	15
	Test/Seminar/Quiz	10
2	End Semester Assessment	60
	TOTAL	**100**

References

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Richard F Gunst, Regression Analysis and its application – A Data Oriented Approach
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James stevens Lawrence, Applied Multivariate Statistics for the Social Sciences: Erlbaum Associates, Publishers Hillsdale, New Jersey
Donald F Morrison, Multivariate Statistical Methods, Second Edition: McGraw Hill Book Company, Singapore
Alexander M Mood, Franklin a Graynil, Guane C Boes, Introduction to the Theory of Statistics Third Edition: McGraw Hill Book Company, Singapore
Donald F Morrison, Multivariate Statistical Methods Second Edition: McGraw Hill Book Company, Singapore
George H Dunteman, Introduction to Linear Models: Sage, New Delhi
Wassermann and Neter, Regression Analysis

Code: DEM 533
Title of the course: Community Outreach Activity
Credit: 4
Semester: III
Prerequisites: There are no specific prerequisites

Aim of the course: The aim of the course is to understand the demographic socio-economic, health, nutritional and habitat status of the community. To provide practical training in designing, conducting and analyzing survey data. To formulate and provide community education on various issues. To disseminate the survey findings to concerned authorities with a view to finding solutions to the felt needs of the community.

Course Description: In accordance with the guidelines from the UGC, the Department of Demography, University of Kerala, has initiated for the first time in 1997, a program which calls for practical training along with classroom learning. A course 'Community Outreach Programme' has been introduced as core course in the curriculum of the third semester students of Demography Course. Students have to collect information about the demographic, socio-economic, health and nutrition and felt needs of the people belonging to a society and prepare report on the basis of it. The main advantage of the programme is that it would help the local authority to launch useful projects for the benefits of the people.

Tasks to be completed
1. Plan and conduct a census survey of all the households in one Panchayat ward, demographic, socioeconomic, health, nutritional and habitat characteristics of the households and felt needs of the community.
2. Analyse and interpret the data
3. Formulate education themes for the community
4. Derive policy implications and provide a link between the community and service providers

Assessment Details

	Marks
Continuous Assessment	**40**
Participation and successful completion of the Survey	20
Sample selection, Questionnaire preparation, Data Collection , Analysis and Interpretation	20
End of Course Assessment	
Survey Report Presentation and presentation and Viva Voce	**60**
Total	**100**

Course Code: DEM 541
Course Title: Population Models and Indirect Estimation
Course Credits: 4
Semester:IV
Prerequisites: The students must have studied DEM513 and DEM521, Techniques of Demographic Analysis I and II

Aim of the Course: This course aims to equip the students in advanced Demographic Techniques.
- To get knowledge about the population models and indirect estimation techniques
- To give practical training in indirect estimation
- To introduce advanced techniques of demographic analysis
- To impart practical skills in indirect estimation

Course Description: Traditionally, demographic estimation has been based on data collected by census and by a vital registration system. A continuous registration system usually has the task of recording vital events as they occur. When this system is coupled with periodic counts of the population (census), the calculation of demographic parameters becomes possible. Assuming that both the registration and census counts were perfect, demographic parameters could be calculated directly from the data reported and there would be no need for indirect estimation. Unfortunately these data collection systems did not exist or their performance is so poor in many countries. So there is a need for Indirect estimation.

Demographic models are an attempt to represent demographic process in the form of a mathematical function or set of functions relating two or more measurable demographic variables. The primary purpose of modelling is simplification, to reduce a confusing mass of numbers to a few , intelligible basic parameters , or to make possible an approximate representation of reality without complexity.

All demographic process, especially human reproductive process, could not be studied directly, it could be studied with help of models.

Course Content

Module 1   Key words : Mortality model, Fertility model , Nuptiality models and Migration model
            Mortality models, Model Life Tables – U. N Model Life Table, Coale&Demney Model Life Tables , Lederman's system of Model Life Tables, Brass Logit System of Model Life Tables , U. N Model Life Tables for Developing Countries.   Stable Population Model Life Tables.

Module 2   Nuptiality Models: Marriage Functions , Model Fertility   Tables, Coales Fertility Models.

Module 3   Migration Models: Model Migration Schedule - An Introduction –

Module 4   Mathematical Models of Fertility ; Stochastic Models - Mathematical Models of Fertility – Concepts and Definition of Stochastic Process, Pure Birth and Death process, Birth-Death Migration Model Markov Chain, renewal process, Fertility Models of Brass, Singh, Sheps and Srinivasan

Module 5   Mathematical Models of Fertility ; Non Stochastic Models - Mathematical Models of fertility – Coale&trussel, Brass RelaltionalGompertz Model, Bongarts Model – Demographic basis, uses and general evaluation of the validity of the models

Module 6   Indirect Estimation –I : Introduction, need and logic
Estimation of vital rates using incomplete information using survey data, using census data, using information form related data – Fertility and Mortality estimation using model stable age distribution

Module 7   Indirect Estimation : II Estimation of Mortality – Estimation of infant and Child mortality from information on children ever born and children surviving (Brass, Sullivan, Trussel and Pathak) Estimation of Adult Survivorship probabilities from information on Orphanhood and widowhood, estimation of adult mortality using successive census age distribution.

Module 8   Indirect Estimation : III   :- Indirect Estimation of Fertility – Estimation of Fertility based information about children ever born – Brass P/F ratio Method, Trussel Modification, Estimation of Fertility from age distribution of a population Reverse Survival Method – Original Method, Own-Children Amethod, Rele's Method, Stable population method, Method using General Population Model

Module 9   Indirect Estimation : IV: - Indirect Method of Estimating Migration – Gross Period Migration flows by proportional Adjustment

Assessment details

No	Assessment	Marks Assigned
1	Continuous Assessment	40
	Class Participation	5
	Assignments	10
	Mid Semester Exam	15
	Test/Seminar/Quiz	10
2	End Semester Assessment	60
	TOTAL	**100**

References

Chiang CL, Introduction to   Process in Biostatistics

Chiang CL, The Life Table and its Applications

CoaleA J, Growth and structure of Human Population

Coale AJ and P Demeny, Regional Model Life Tables and Stable Populations, Academic Press, New York

Coale A J &Trussell (1979), Model Fertility Schedule Variations in the Age Structure of Child Bearing in Human Population,   Population Index, vol.40

Keyfitz N, Introduction to Mathematics of Population

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Namboothiri K and C M Suchindran, Life Table Techniques and their Applications

K B Pathak& F Ram, Techniques of Demographic Analysis

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R Ramakumar, Technical Demography, John Wiley, New Delhi

A Rogers, Introduction to Multiregional Demography, Wiley and Sons, New York

M Sheps and Menken, Mathematical Models of Conception and Birth

H S Shryock, J S Siegel and Associates, The Methods and Materials of Demography

S N Singh, A Probability Model for Couple Fertility, Sankhya

K. Srinivasan, Analytical Models for the Study of Closed and Open Intervals

United Nations, Manual IV

United Nations, Model Life Table Complete

United Nations, Manual X

United Nations, Model Life Table Abridged

Course Code: DEM 542
CourseTitle: Population and Development
Course Credit: 4
Semester: IV
Prerequisites: There are no specific prerequisites

Aim of the Course: This course aims to impart knowledge on the key issue of interaction between population and development. At the end of this course the students are expected to

- Comprehend the interaction between population growth and various dimensions of development
- Explain the theories describing the relation between population and development
- Analyze various dimensions of human development through the various measures of human development
- Relate population growth and age structure transitions with unemployment, factors of production, saving, etc., sustainable development and window of opportunity
- Explain the decentralized planning and panchayatiraj system in India

Course Description: The relationship between population and development has been a subject of discussion since time immemorium. A historical perspective of the debate is essential to understand the conceptual framework of the interaction. This course provide an in depth and all-encompassing description of the population and development debate with special emphasis on changes in age structure, dimensions of human development and their measurements, various developmental programmes directly affecting population including decentralized planning. Aspects women empowerment and its impact on overall development is also discussed in detail in this course.

Course Content

Module 1	Basic concepts and definitions of development. Sen's concept of development. Sustainable development. Economic development versus economic growth. Globalisation and global economy. Indicators of development Utility, Consumption, Production, Distribution and exchange
Module2	Relationship between population and development. Effects of economic development on population growth and vice versa. Various debate
Module3	e regarding population and development relation. Malthusian theory Marxian approach. Coale and Hoover study, Leibenstein's critical minimum effort theories.
Module4	Demographic aspects of development. Population and natural resources , Factors of production. Socio economic and demographic factors influencing saving, capital formation,

investment and technological.

Module5   Human Development. Population and employment. Labour force. Work participation. Unemployment. Types of unemployment.Unemployment in India and Kerala

Module6   Development of human capital. Concepts and measures. POLI, HDI, Gender adjusted HDI, Human poverty index. Human development in India.

Module7   Women and development Concept an indicators of status of women, interrelationship between status of women and demographic change

Module8   Age structural transition in India. Window of OpportModuley

Module9   Decentralized planning people's participation in rural development in India. Pnachayati Raj system. Kerala's case.

Assessment details

No	Assessment	Marks Assigned
1	Continuous Assessment	40
	Class Participation	5
	Assignments*	10
	Mid Semester Exam**	15
	Test/Seminar/Quiz***	10
2	End Semester Assessment****	60
	TOTAL	**100**

References

ModuleedNations : Determinants and consequences of Population Trends New York, UN 1953

CoaleAnsley J and Edger M Hoover: Population growth and economic development in low income countries a case study of India's prospects, New Nursey, Princeton, University Press, 1958

Bogue Donald J: Principles of demography, New York,John, Wiley and Sons, 1969

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Misra, Bhasker D Introduction to the study of population

Todaro, Michel P ; Economic Development in the third world 2nd education New York, Longiman, 1981

CDS Working Paper ;Panchayat Raj System in Kerala

Richard A Easterlin: Population and Economic change in Develo0ping Countries, National Bureau of Economic Research

Shivaramen : Democratic Decentralization in Panchayat Raj system. MD publication Pvt. Ltd., New Delhi

Guy standing :-Labourforc participation and Development 2nd edition
International Labour Office, Geneva

ModuleedNations : 1968:Methods of Analysing Census data on Economic
  activities of the Population Moduleed Nations.

Population Economics, selected Esseys of Joseph.J.Spengler Duke University
  Press, Durham North Carolina

A M Goryacheva : Population and Economic Growth in India, Agricole Publishing
  Academy

B N Ghosh : Studies in Population and Economic Development Vol.1&II Deep and
  Deep Publication

D M Mithani : Modern Economic Analysis, Himalaya Publishing House

D J Bartholmew Ed.: Manpower Planning

Desai Bhalerao : Economic Planning and Policy

Population Headliners

Course Code: DEM 543
Course Title: Population Education
CourseCredit: 2
Semester: IV
Prerequisites: There are no prerequisites for this course

Aim of the Course: The purpose of this course is to educate the present generation about population, development and environment for a better quality of life of their own and their future generations. Population explosion is a curse and is damaging to the development of the country and its society. This course aims at developing an understanding of the concepts of population education and familiarize them with the development of population education, need of population education, relationship of population education with different disciplines, determinants of population change , consequences of Rapid Population Growth, measures to control rapid population growth and population education programs launched by different organisations.
 The General objectives of this course are as follows:
   - To make the students familiar with meaning, development, need, aims and objectives of population education.
   - To make aware the students about family life education and responsible parenthood
   - To provide the students with the understanding of the scopes and major contents of population education.
   - To acquaint the students with relationship of population education with different disciplines.
   - To develop students in understanding determinants of population change.
   - To make students aware with the consequences of rapid population growth on different aspects.
   - To develop capacity in students to suggest the direct and indirect measures to control rapid population growth
   - To gain understanding among students about the population education programs conducted by formal as well as non-formal sectors and NGOs / INGOS.

Course Description: In this course, the student-teachers are exposed to various aspects of family life education   including the concept of a family and an assessment of key human demographic patterns and   their implications on certain family life aspects such as reproduction, fertility and birth control. Control of sexually transmitted diseases and proper rising of children are also addressed. Basically, population education is designed to improve and increase people's knowledge and awareness of the cause and consequence of population growth at the family, commModuley, national and international levels. It aims to provide a better understanding of the relationship between population processes and dynamics.

Course Content

module 1	Introduction, Concepts, Definitions, nature and scope of the subject, tools and techniques, education and development programmes, population problems in general, role of NGOs' opinion leaders, religious leaders and teachers in helping the public for findings out solutions.
Module 2	Formal, non-formal and informal education, Definitions, population communication, skills and strategies role of media in communication
Module 3	Family life education, goals, role of parents and teachers in disseminating knowledge about sex education, care for adolescents, responsible parenthood, safe motherhood, child care and value of children quality of life, development of better attitude towards society and family, resource management, family resources, human and non-human resources, Diseases STI, RTI, HIV/AIDS.
Module 4	Gender Issues, Gender discrimination, communication, Status of women in family and society. Empowerment of women, decision making power, Women and employment, Women and poverty
Module 5	Social issues, alcoholism drug abuse, prostitution, violence dowry deaths and suicide, possible remedial measures
Module 6	Preparation of modules for imparting Population Education

Assessment Plan

No	Assessment	Marks Assigned
1	Continuous Assessment	40
	Class Participation	5
	Assignments *	10
	Mid Semester Exam**	15
	Test/Seminar/Quiz***	10
2	End Semester Assessment****	60
	TOTAL	**100**

Note : *Two to four assignments are given and take the average
** Maximum marks out of 30 and taking it's half. Both Multiple choice and Essay questions, out of five answer any three.
***Test/Quize has multiple choice questions and seminars may be power point presentations
****End semester exam will be out of 60 Marks. It contains Short answer type Questions and Essays. Answer any five out of eight questions

References:

David Kline and David Harman (edited), Issues in Population Education –
Kathuria, Methods of teaching Population Education
Bhave VN, N.S.Deodharand Dr.S.V.Bhave (edited), You and Your Health
HarshaKumarasena , A text book of Population education,published by Wisdom
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OJ., (1984) Population education, International encyclopedia of population,
Volume One, New York: the Free Press.
Seshadri C and U S Madhastha (edited), Population Education – A manual for
Teacher educators
Sheshadri, C. and J.L. Pandey, (1991) Population education: A national source
book, New Delhi: NCERT.
Soman C R, P G K :Panicker, Health status of Kerala
Moduleed Nations, Determinants and consequences of Population Trends
Moduleed Nations, World Population Policies,Vol. 1, Vol.II and Vol. III
Park J E, K Park, Park's Text book of preventive and social medicine (13th edn)

Course Code: DEM 544
Course Title: Dissertation
Course Credit: 6
Semester: IV
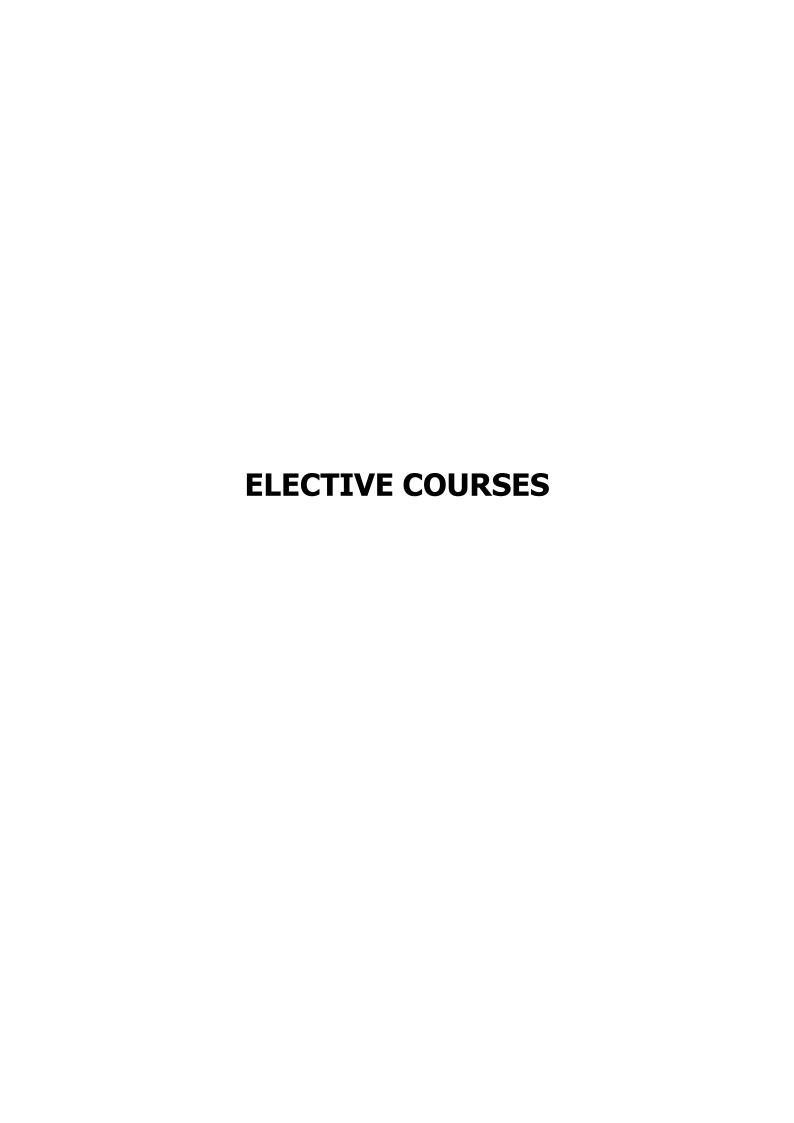**Prerequisites:** There are no prerequisites for this course

Aim of the Course: This six credit course provides the students an opportunity to work on a specific area in demography/public health in which they are interested in by taking up a specific problem of interest and submit a detailed report on the same after a scientific investigation of the problem. By the end of the course the students will be able to
   * Carry out scientific research on any area in Demography and health
   * Design and carry out research and analyze data using any software package
   * Write a detailed report of the scientific research carried out

Course Description: The dissertation allows students to consolidate and extend the knowledge and skills acquired during the coursework and apply these in a practical way in a public health setting.There will be faculty supervisors helping the students in doing the project work and to write a dissertation on the same.

Assessment Plan

No	Assessment	Marks Assigned
1	Written report of the research undertaken	75
2	Presentation of findings on the research work	25
	TOTAL	**100**

ELECTIVE COURSES

DEM 501   Population Sociology   (2 credits)

Module1   Demography vis-a-vis Population Sociology- Interfaces

Module2   Historical development- Survey of Population Growth-Natural resources- their availability and utilization

Module3   Population Structure and Characteristic change

Module4   Marriage widowhood divorce – migration-social implications

Module5   Basic sources of Demographic data – Types of data – method of data collection – evaluation of India

Module6   Demographic factors in social and economic development

Module7   Measures of population control and their impact

EM 502   Gender Issues   (1 credit)

Module1   Introduction

Module2   Social Organizations

Module3   Society and Gender Roles

Module4   Female Status and Autonomy, Women's Empowerment and their relationship in Human Development

Module5   Family Life Education- Goals, Gender issues/discrimination, safe motherhood and quality of life

Module6   Process of communication – Relevance of Intra spouse communication in decision making

Module7   Gender and Responsible Parenthood.

DEM 503   Acturial Science   (2 credits)

Module1   Financial Mathematics   – Basic Calculus, Measurement of
                 Interest, Theory of Compound Interest, Sinking Funds, Yield
                 Rates, Introduction to financial dividends

Module2   Probability and mathematical Statistics

Module3   Acturial Models – Poisson Process, Compound Poisson process,
                 marcov Chain Simulation, Financial applications

Module4   Quantitative methods for Acturies – Algorithms, Finite Differences,
                 Interpolation, Individual Risk Model, Life Tables

Module5   Life Cintingencies – Life table Analysis, Insurance, Annuities,
                 Benefits premiums Life Insurance Mathematics

DEM 504   Population Genetics   (2 credits)

Definition-Relation between population and Genetic – Social Biology-Mendal's
law of Inheritance Gene pool, Mytosis-Chromosomes and RNA Meiosis-Mutation-
Natural selection and in breeding-Genetic Engineering-Euginics Genetic Variety.
Differential Fertility-Differential Mortality.

DEM 505   Kerala's Demography
(2Credits)

Module 1   Definitions and Basic concepts used in demography-rates ratios
                 population growth population structure and composition.
                 Population pyramid.

Module2   Sources of Demographic data in Kerala Census, Sample
                 registration System (SRS),Civil Registration Systems [CRS},
                 National Family Health Surveys (NFHS), Reproductive and Child
                 Health Surveys (RCH)

Module3   Population levels and trends in Kerala since 1901 Geographical
                 Distributions, Inter district Variations – causes and consequences.
                 Demographic Features. Population and Unemployment in Kerala

Module4   Trends in Fertility, Mortality, Migration and Urbanisation in Kerala.
                 Population Ageing -Implications

DEM 506   Business Demography   (2 credits)

Module1   Population as a market for consumer goods and labour market-Population Dynamics and its implications for change in the sizes and composition of market-Relevance of Applied Demography to business organization-importants of the subject in the context of globalization and privatization.

Module2   Basic concept in marketing-Definition of market, Evolution of marketing, Role and Functions of Marketing-Importance of products, plays prizes and promotion in marketing activities – Marketing strategies-Need to understand life styles and consumer behaviour-Need to understand consumer behaviour-Need to understand consumer demographics-Importances in Market Research.

Module3   Demographic data base for market research-Population size, growth rate, sex ratio, Age Structure its composition by educational level, occupation, living conditions and other socio-economic characteristics-household size and composition-Relievance of these aspect for the market for different products.

Module4   Special Distribution of population on market location-geographic methods of market analysis update methods-Geo-Demographic systems-Retail potential measures-sites analysis process-products planning and market segmentation.

Module5   Market survey-Market research process, problems formulations-research design sampling data collection methods-analysis and interpretation of data-cases study for some products.

Module6   Market forecasts-Population projection-Projection for smaller areas and for market segments family life cycle, household projection future market for products and activities related to children youth ad aged gender specific needs.

DEM 507   Population Geography   (2 credits)

Introduction-Definition, subject matter, scope, nature of population Geography, Relationship with other disciplines-settlement Geography-man and factors of Human Evolution-Influence of Climate factors. Vegetarian and physiogeographic factors – the main anthropogeographical regions-Population/Resource region – Human life different regions-Devisions of mankind-man's relations with environment-Process and patterns of migration, circulation-typology of migration-urbanisation patterns – Quantitative Techniques in Population Geography

DEM 508   Population Ageing   (2 credits)

Definition-Indicators of populations ageing-demography of population ageing-trends of ageing-in Developed and Developing countries-Population ageing Vs. Gerontology-Social Aspects-Economic Aspects- Health aspects- Psychological dimensions

DEM 509   Field Study Report   (2 credits)

Visiting Institutions relate to demographic and population research and preparing reports

Field Study for M.Sc. Demography is part of the curricula. As part of teaching programme of M.Sc. Demography, the students of the Department will be visiting various Institutions/Organizations to acquaint themselves with the research activities and job opportModuleies in the field of population and allied areas. The students will make a Field Study Report and this will be an Elective Course (2 Credits) exclusively for M.Sc. Demography Students.

Course structure and mark distributions

Continuous Assessment	Marks
Participation	20
Social Behaviour of students during visits	20
Report writing and Evaluation	60
Total	100

DEM 52A   India's Population Dynamics

Module1	Definitions and concepts used in demography-rates ratios population growth population structure and composition. Population pyramid
Module2	Sources of Demographic data in India. Census, Sample registration System (SRS), Sample surveys, Vital registration, Fertility Surveys, National Family Health Surveys
Module3	Population trends inn India since 1901. Inter State Variations – causes and consequences
Module4	Trends in Fertility, Mortality, Migration and Urbanisation in India, Demographic Transition Policy Implications
Module5	Kerala's Demographic Transitions since 1901
Module6	Demographic features of Kerala – Low replacement fertility-Ageing
Module7	Inter-District variations in the growth rate of population in; Kerala, since 1951. Causes and consequences