BHARATHIAR UNIVERSITY: COIMBATORE–46
Department of Population Studies
M.A. Population Studies
(For the University Students Admitted During the Academic Year 2010-2011& Onwards)
SCHEME OF EXAMINATION- CBCS Pattern

| SEMESTER | CODE | SUBJECT | Class Hrs. | UNIVERSITY EXAMINATION | | | CREDITS |
				Internal	External	TOTAL	
I	10POPB13A	Introduction to Population Studies	4	25	75	100	4
	10POPB13B	Mortality and Morbidity	4	25	75	100	4
	10POPB13C	Social Demography	4	25	75	100	4
	10POPB13D	Research Methods	4	25	75	100	4
	10POPB13E	Demographic Scenario of Tamil Nadu	4	25	75	100	4
	101GS	Supportive-I	2	12	38	50	2
II	10POPB23A	Fertility and Nuptiality	4	25	75	100	4
	10POPB23B	Statistical Methods	4	25	75	100	4
	10POPB23C	Demographic Methods	4	25	75	100	4
	10POPB23D	Demographic and Statistical Methods I - Parctical–I:	4	40	60	100	4
	10POPB23E	Adolescent Issues	4	25	75	100	4
	102GS	Supportive-II	2	12	38	50	2
III	10POPB33A	Population Economics	4	25	75	100	4
	10POPB33B	Human Ecology, Migration and Urbanization	4	25	75	100	4
	10POPB33C	Advanced Demographic Methods	4	25	75	100	4
	10POPB33D	Demographic and Statistical Methods II - Practical–II	4	40	60	100	4
	10POPB33E	Reproductive and Child Health	4	25	75	100	4
	103GS	Supportive-III	2	12	38	50	2
IV	10POPB43A	Population, Health and Nutrition Education	4	25	75	100	4
	10POPB43B	Population Policies, Programmes and Evaluation	4	25	75	100	4
	10POPB43C	Population and Development	4	25	75	100	4
	10POPB43D	Application of SPSS Software for Database Management and Analysis	4	40	60	100	4
	10POPB47V	Research Project & Viva-Voce Examination	8	80	120	200	8
		TOTAL				**2250**	**90**

SUPPORTIVES OFFERED TO OTHER DEGREE PROGRAMMES

Basic Issues in Population   2
Sources of Demographic Data   2
Population Policies and Programmes   2
Database Management and Analysis using SPSS   2

Introduction to Population Studies

Course Number: **10POPB13A**   Number of Credits: **4 (Four)**

Subject Description:
This course portrays fundamentals of Population Studies including the population growth and distribution, population composition and theories of population.

Goals:
To facilitate the students to learn the elementary aspects of population and its nature and scope of population studies.

Objectives:
On successful completion of the course the students should enrich their knowledge about (i) the nature and scope of population studies, (ii) population growth and distribution around the world and India, and (iii) a historical sketch of population theories.

Contents:

Unit   I   Nature and Scope of Population Studies
Demography and Population Studies. Nature and Scope. Development of Population Studies and its interdisciplinary nature. Population Studies and Other Sciences.

Components of Population Change
Fertility, Mortality and Migration, and their interrelationships.

Unit   II   World Population: Growth and Distribution
History of World population growth, population growth in developed and Developing countries, World population prospects.

Unit   III   Population Growth in India
Trends in India's population growth in the States and Union Territories. Factors responsible for the growth of population. Prospects for population growth in India.

Unit   IV   Population Composition in India
Age and Sex structure: measures, Factors affecting age and sex structure. Marital Status: measures and analysis of change, Socio-economic Characteristics: literacy and educational attainment, religion, language, and mother tongue, rural or urban residence, labour force participation, employment and occupation.

Unit   V   Population Theories: A Historical Survey
Early thinking of Population Issues: Confucius and other Chinese writers, Greek thought, Indian (Kautilya's writings) and Roman thought Religion and Population Issues: Hinduism, Judaism, Christianity and Islam. Pre-Malthusian theories on population, mercantilist and physiocratic schools of thought, political arithmetic.Malthusian Theory: Theme and Criticism.The classical and the neo–classical schools of thought, Optimum population theory, socialist writings (Marx and Engles); Mathematical and Biological theories, Demographic Transition.

References:

Selected sections from the following:

1. Agarwala, S. N., 1981. ***India's Population Problems.*** New Delhi: Tata McGraw Hill.

2. *Bhende, Asha A. and Kanitkar, Tara, 2000. ***Principles of Population Studies.*** 9th edition. Mumbai: Himalaya Publishing House.

3. *Mishra B. D., 1995. ***An Introduction to the Study of Population.*** Second edition. New Delhi: South Asian Publishers Pvt. Ltd.

4. *Thompson, Warren S. and David Lewis, 1976. ***Population Problems.*** New Delhi: McGraw Hill Book Co.

5. *United Nations, 1973. ***The Determinants and Consequences of Population Trends***, ***Vol. I.*** ST/SOA/ SER.A./SO, Population Studies No: 50. New York: U.N.

6. *United Nations, 1980. ***World Population Trends and Policies, 1979. Monitoring Report, Vol. I.*** ST/ESA/SER.A /70, Population Studies No: 70. New York: U.N.

7. *United Nations, ESCAP, 1982. ***Population of India.*** *Country Monograph Series Number*   New York: UN-ESCAP.

Note: * May be treated as Text Books.

Mortality and Morbidity

Course Number: **10POPB13B**   Number of Credits: **4 (Four)**

Subject Description:
This course portrays the basic concepts and measures of mortality and morbidity as well as their related aspects.

Goals:
To enable the students to learn the various aspects of mortality and morbidity including life table and causes of death so as to understand such aspects on comparative basis across the countries of the world and different states and sub-groups of population in India.

Objectives:
On successful completion of the course the students should have knowledge about (i) various concepts and measure of mortality and morbidity, (ii) life table and (iii) causes of death.
Contents:

Unit	**I**	**Basic Concepts and Measures**

Importance of the study mortality, concepts, sources of data and limitations.
Basic measures of mortality: Crude death rate; age, sex, martial status, specific and standard death rates.

Unit   II   Life Table
Concepts, definitions of columns, current and cohort life tables, complete life tables and abridged life tables, construction of life tables.

Unit   III   Differentials and Trends in Mortality
Mortality differentials by age, sex, residence and socio-economic characteristics. Trends in mortality in developed and developing countries, and in India. Prospects of mortality decline.

Unit   IV   Infant and Childhood Mortality and Maternal Mortality
Importance of the study of infant and childhood mortality, measures; infant mortality rates; neonatal, post- neonatal and peri-natal mortality rates.
Differentials and trends in developed and developing countries and in India, Reasons for high IMR in India and prospects of decline.
Maternal mortality rate, ratio, levels and trends.

Unit   V   Morbidity and Causes of Death
Definition of morbidity, incidence and prevalence of disease. WHO classification of causes of death, changing patterns of causes of death; the epidemiological transition, health transition, Reproductive Health, AIDS.

References:

References Selected sections from the following:

1. Barclay, George, 1958. ***Techniques of Populations Analysis.*** New York: John Willey & Sons, Inc.

2. Bhat P. N. Mari, Preston, S. N. and Tim Dyson, 1984. ***Vital Rates in India, 1961-81.*** Committee on Population and Demography, Report No: 24. Washington D. C.: National Academy Press.

3. *Bhende, Asha A., and Tara Kanitkar, 2000. ***Principles of Population Studies.*** 9th Edition. Mumbai: Himalaya Publishing House.

4. *United Nations, ESCAP, 1982. ***Population of India.*** *Country Monograph Series No: 10.* New York: UN-ESCAP.

5. Padmanabha, P., 1982. "Mortality in India: A note on trends and implications", ***Economic and Political Weekly*** 17(32): 1285-90.

6. Padmanabha, P., 1984. "Use of Sample Registration Systems for studying levels, Trends and Differentials in Mortality: The Experience of India", in United Nations (ed.), ***Data Base for Mortality Measurement***. Population Studies No: 84. New York: U. N.

7. *Palmore, James. A. and Robert, W. Gardner, 1983. ***Measuring Mortality Fertility and N****atural Increase: A Self Teaching Guide to Elementary Measures***. Honolulu: The East-West Centre.

8. Ruzicka, L., and Hansluwka H, 1982. "Mortality transition in south and east Asia technology confronts poverty", ***Population and Development Review*** 8(3): 567-588.

9. *Shryock, Henri S., Jacob S. Siegel and Associates, 1980. ***The Methods and Materials in Demography.*** Washington D. C: U.S. Bureau of the Census.

10. United Nations, 1973. ***Determinants and Consequences of Population Trends.*** New York: Department of Economic and Social Affairs.

11. Omran, A. R., 1971. "The epidemiological transition: A theory of the epidemiology of population change", ***Milbank Memorial Fund Quarterly*** 49: 509-538.

Note: *May be treated as Text Books.

Social Demography

Course Number: **10POPB13C**　　　　　　　　Number of Credits: **4 (Four)**

Subject Description:
This course portrays the inter-relationship between Sociological concepts and Demography.

Goals:
To enable the students to learn the different aspects of related to society, marriage and family as well as their consequences in demographic parameters and vice-versa

Objectives:
On successful completion of the course the students should have an understanding about (i) basic concept in sociology, (ii) society and social structure, (iii) marriage and family as social institutions, (iv) changing role of demographic scenario in society, and (v) demographic behaviour in social context.

Contents:

Unit　I　　Concepts in Sociology
Nature and scope of Sociology, its role in understanding demographic behaviour. Basic concepts: association, Institution, community and society. Brief introduction to culture; norms, values, etc., status and role, forms of interaction, Primary and secondary reference groups, social stratification, social processes, social control, social change and modernization.

Unit　II　　Society in India
Social structure, class, caste system and Gender roles, legislative, normative and behavioural contexts, tribes and minorities, social change.

Unit　III　　Marriage and Family
Marriage and Family as institutions, types of marriage and dissolution, marriage practices, types of family, life cycle, Recent patterns and changes in marriage and family

Unit　IV　　Social Consequences of Demographic Change
Demographic change affecting society. Effects of changes in fertility, mortality and migration on marriage, family kinship, life-cycle, and society, social legislation and social change.

Unit　V　　Demographic Behaviour in Social Context
Family size desires, norms, family building decisions, choice of contraception, socio-cultural taboos relating to fertility and contraception. Gender discrimination in fertility and health behaviour.

References:

Selected sections from the following:

1. Bhai, L. Thara, 2001. *Ageing: Indian Perspective.* New Delhi: Decent Books.

2. * Cuber John F., 1958. *Sociology: A Synopsis of Principles.* New York: Appleton Century Lcarofts.

3. Desai A. R., 1969. *Rural Society in India.* Bombay: Popular Prakashan.

4. Kapadia, K. M., 1966. *Marriage and Family in India.* Bombay: Oxford University Press.

5. Karve, Irawati, 1958. *Kinship Organization in India.* Poona: Deccan College Research Institute.

6. Levi Strauss, C., 1969. *The Elementary Structures of Kinship.* Oxford; Alder Boss.

7. Mendelbaum, David, G., 1974. *Society in India Vol. I & 2.* Berkeley: University of California Press.

8. Nam, Charles, B, 1968. *Population and Society.* Boston: Houghton Mifflin, 1968.

9. Premi, M. K. A Ramanna, and Usha Bambawale, 1979. *An Introduction to Social Demography.* Delhi: Vikas.

10. * Srinivas, M. N., 1966. *Social Change in Modern India.* Berkeley: University of California Press.

11. Srinivas, M. N., 1962. *Caste in India and Other Essays.* Bombay: Asia.

12. * United Nations, 1973. *Determinants and Consequences of Population Trends.* New York: U. N.

* May be treated as Text Books.

Research Methods

Course Number: **10POPB13D**   Number of Credits: **4 (Four)**

Subject Description:
This course portrays the basic research methods.

Goals:
To enable the students to learn the different aspects of research methods including data organisation and data analysis so as to apply the same while carrying out the project work.

Objectives:
On successful completion of the course the students should have an understanding about (i) steps in carrying out research, (ii) research designs, (iii) basic methods and instruments of data collection, (iv) data organisation, and (v) data analysis and presentation of research findings.

Contents:

Unit   I   Introduction
Science, meaning and characteristics, theory and facts, scientific methods and techniques, aims, objectives and scope of social research, Steps in research.
Formulation of a research problem, framing objectives and hypotheses. Operationalisation of concepts.

Unit   II   Research Designs
Exploratory, descriptive, experimental, diagnostic and evaluative designs; basic experimental and quasi experimental designs for research, sources of invalidity and sampling design.

Unit   III   Methods of Data Collection and Research Instruments
Interview,   observation,   focus   group   discussions,   micro-demographic approach, secondary data. Preparations of instruments, reliability and validity of the instrument; questionnaire and interview schedule. Interview technique.

Unit   IV   Data Organisation
Recruiting and training of field staff, field work organisation.
Basic   principles   of   editing   and   coding,   instructions   for   coding   and transcription, errors in coding and transcription, verification procedures.

Unit   V   Analysis and Presentation of Data and Research Findings
Brief description of manual and machine tabulation. Uses of computers in data base   management,   spreadsheets,   and   statistical   demographic   software. Interrelationships between various steps in research. The purpose, the structure, and the writing procedures in preparing manuscripts for scientific journals and reports.

References:

Selected sections from the following:

1. Festinger, L. and D. Katz, 1953. ***Research Methods in Behavioural Sciences.*** New York: The Dyden Press.

2. Good W. J., and H. K. Hatt, 1952. ***Methods in Social Research.*** Tokyo: McGraw Hill.

3. Kerligner, F. N., 1983. ***Foundation of Behavioural Research.*** New Delhi: Surjeet Publication.

4. Kothari. C. R., 2004. ***Quantitative Techniques.*** 2nd edition. New Delhi: Vikas Publishing House Pvt. Ltd., 2004.

5. Forum: Focus Group for Health Research, 1994. ***Health Transition Review*** 4(1): 81-104.

6. * Sharma, R. A., 2000. ***Essentials of Scientific Behavioral Research.*** Meerut: Surya Publications.

7. Singh, Kultar, 2007. ***Quantitative Social Research Methods.*** New Delhi: Sage Publications.

Note: *May be treated as Text Books.

Demographic Scenario of Tamil Nadu

Course Number: **10POPB13E**   Number of Credits: **4 (Four)**

Subject Description:
This course presents the demographic scenario of Tamil Nadu state in detail over a period of time.

Goals:
To enable the students to study the different demographic aspects of Tamil Nadu state on historical basis as well as future prospects including their relationship with socio-economic development.

Objectives:
On successful completion of the course the students should have an understanding about (i) population situation, (ii) mortality and health transition and its association with nutritional programmes, (iii) fertility and family welfare programmes, (iv) migration and urbanization and (v) the interrelationship between population growth and socio-economic development.

Contents:

Unit   I   Population Situation
Tamil Nadu and Tamil Culture; Population Data availability and their quality. History of population growth, present situation and future prospects; Demographic profile of Tamil Nadu.

Unit   II   Mortality and Health Transition, and Nutritional Programmes
Mortality levels, trends and differentials, in Tamil Nadu; sex, age patters of mortality. Infant and child mortality – levels and trends; causes of death; Incidence of female feoticide and infanticide. Health situation, Health policies and programmes. Nutritional Status; Nutrition Programmes; Supplimentary Nutrition Programmes: Applied Nutrition Programme, Chief Ministers Noon-Meal Programme, ICDS, Anganwadi and Balwadi Centres.

Unit   III   Fertility and Family Welfare Programme
Fertility levels, trends and differentials in Tamil Nadu state, Customs and practices affecting fertility, value of children and women's status, Factors responsible for the recent decline in birth rate, Family welfare programme performance, Practices related to age at marriage and MTP, Births Averted due to family welfare programme.

Unit   IV   Migration and Urbanization
Migration in Tamil Nadu: Inter and intra-state migration; inter and intra-district migration and factors associated with it. Urbanization in Tamil Nadu: Levels and trends, Problems and policies; problems of slums and related policies.

Unit   V   Population Growth and Socio-Economic Development, and Labour Force
Interrelationship between Population growth and Socio-economic development in Tamil Nadu. Labor Force: Concept, Trends in Economic activity rates in comparison with   India. Trends in Industrial sectors and occupational divisions.

References:

Selected sections from the following:

1. IIPS, Mumbai and ORC Macro, 2001. ***National Family Health Survey (NFHS-2), 1998-99 Tamil Nadu.*** Mumbai: IIPS.

2. Madras Institute of Development Studies, 1988, ***Tamil Nadu Economy: Performance and Issues.*** New Delhi: Oxford and IBH Publishing Company Private Limited.

3. *Mahadevan, K., and M. Sumangala, 1977. ***Welfare Model of Development and Demographic Transition,*** Delhi: B. R. Publishing Corporation, 1977.

4. *Tamil Nadu Government, 1995-96, ***Policy Note on Medical and Public Health.*** Chennai: Government of Tamil Nadu.

Note: * May be treated as text book.

Fertility and Nuptiality

Course Number: **10POPB23A**   Number of Credits: **4 (Four)**

Subject Description:
This course presents the various features of fertility and nuptiality including socio-economic theories of fertility.

Goals:
To enable the students to learn the different aspects of fertility and nuptiality, factors affecting the same and socio-economic theories of fertility.

Objectives:
On successful completion of the course the students should have an understanding about (i) the various concepts of fertility and nuptiality, (ii) measures of fertility and nuptiality, (iii) factors affecting fertility and nuptiality, (iv) levels and trends of fertility and nuptiality, and (v) socio-economic theories of fertility.
Contents:

Unit   I   Introduction
Importance of the study of fertility: Brief introduction to reproductive Physiology, concepts and definitions of basic terms – fecundity, fertility, conception, contraception, pregnancy, abortion, still- birth, menarche – menstrual cycle, menopause, family size, marriage, widowhood, divorce, separation, sources of data and limitations.

Unit   II   Measures of Nuptiality and Fertility
Basic measures of nuptiality: measures of incidence of age at first marriage, widowhood, divorce, separation and remarriage, singulate mean age at marriage.

Basic measures of fertility: Crude birth rate, child-women ratio, children-ever-born, childlessness, general fertility rate, age-specific fertility rate, total fertility rate, marital fertility rate, rates specific for parity and duration of marriage, parity progression ratios, closed and open birth intervals, cohort fertility, gross reproduction rate, net reproduction rate.

Unit   III   Factors Affecting Nuptiality and Fertility
Demographic, physiological, social, cultural, economic and psychological factors affecting nuptiality and fertility, value of children. Age at marriage and fertility. Davis-Blake intermediate variables framework and Bongaarts' proximate determinants of fertility.

Unit   IV   Levels and Trends in Nuptiality and Fertility
Levels, trends and differentials in nuptiality and fertility in developed and developing countries and in India.

Unit   V   Social and Economic Theories of Fertility
Social capillarity theory, theory of change and response, fertility transition theory, threshold hypothesis, wealth flow theory, micro economic theories of fertility (theories by Liebenstein, Becker and Easterlin).

References:

Selected sections from the following:

1. Agarwala, S. N., 1962. *Age at Marriage in India.* Allahabad: Kitab Mahal Private Limited.

2. *Agarwala, S. N., 1985. *India's Population Problems.* Bombay: Tata McGraw Hill Publishing Co., Ltd.

3. *Bhende Asha A. and Tara Kanitkar, 2000. *Principles of Population Studies.* 9th edition. Mumbai: Himalaya Publishing House.

4. *Bongaarts J., and Potter, R. G., 1983. *Fertility, Biology and Behaviour. An Analysis of the Proximate Determinants.* New York: Academic Press.

5. *Bulatao, R. B., and Lee, R. D., 1983. *Determinants of Fertility in Developing Countries Vol. l.* New York: Academic Press.

6. Caldwell, J. C., 1982. *Theory of Fertility Decline.* London: Academic Press.

7. Driver, Edwin, D., 1963. *Differential Fertility in Central India.* Princeton; Princeton University Press.

8. Freedman, R., 1963. *The Sociology of Human Fertility: A Trend Report and Bibliography.* Oxford: Basil Blackwell.

9. Nag, Moni, 1966. *Factors Affecting Human Fertility in Non-Industrial Societies.* Yale University Publications in Anthropology No: 66. New Haven: Yale University, 1966.

10. *Shryock, Henry, S., Jacob S. Siegel and Associates, 1980. *The Methods and Materials of Demography, Vol. 1 & 2.* Washington, D. C.: U. S. Bureau of the Census.

11. United Nations, 1963. *Population Bulletin of the United Nations, No: 7.* New York, United Nations.

12. *United Nations, 1973. *The Determinants and Consequences of Population Treads, Vol.1.* New York: United Nations.

13. *United Nations, ESCAP, 1982. *Population of India.* Country Monograph Series No: 10. New York; UN-ESCAP.

Note: * May be treated as Text Books.

Statistical Methods

Course Number: **10POPB23B**   Number of Credits: **4 (Four)**

Subject Description:
This course presents the use of basic statistical methods including descriptive statistics, elementary probability theory, sampling methods and testing of hypothesis.
Goals:
To enable the students to learn the theoretical aspects of basic statistical methods and its possible applications.

Objectives:
On successful completion of the course the students should have an understanding about (i) description of the data, (ii) measures of central tendency and dispersion, (iii) probability theory and its distributions, (iv) sampling and (v) methods of testing hypothesis.

Contents:

Unit   I   Introduction
Use of statistical methods; description of data, statistical inference.
Types of measurements: Nominal, ordinal, interval and ratio scales.
Frequency distributions: Raw data, frequency distributions, histograms and frequency polygons, relative frequency distributions, cumulative frequency distributions, ogives, frequency curves.

Unit   II   Descriptive Statistics
Measures of Central tendency: Arithmetic mean, weighted mean, median, mode, measures from grouped data, empirical relation between mean, median and mode. Measured of location; quartiles, deciles and percentiles.
Measures of dispersion; mean deviation, quartile deviation, standard deviation, variance, computation of these measures from ungrouped and grouped data, co-efficient of variation, standardized variables and scores.

Unit   III   Elementary Probability Theory and Probability Distributions
Definition of probability, conditional probability; independent and dependent events, mutually exclusive events. Random variables, discrete and continuous probability distributions. Mathematical expectation.
The binominal distribution, the Poisson distribution, the normal distribution, properties, Fitting theoretical distributions to sample data.

Unit   IV   Sampling Methods
Probability and Non-probability sampling; simple random sampling, systematic sampling, stratified sampling, cluster sampling and multi stage sampling.

Unit   V   Testing of Hypothesis
Concepts of statistical hypothesis, decision rule, critical region, level of significance, type I and type II errors.   Large and small sample tests for means and proportions.

References:

Selected sections from the following:

1. Blalock, Jr. Hubert M., 1984. *Social Statistics.* 2nd edition. New York: McGraw Hill Book Company.

2. Daniel, Wayne W., 1974. *Bio-Statistics: A Foundation for Analysis in the Health Sciences.* New York: John Wiley & Sons Inc.

3. Goon, A. M., M. K. Gupta and D. Das Gupta, 1966. *Basic Statistics.* Calcutta. World Press.

4. Kurtz, Norman L. R., 1983. *Introduction to Social Statistics.* Tokyo: McGraw Hill International Book Company.

5. *Snedecor, George, W and William, G. Cochran, 1967. *Statistical Methods*, 6th edition. New Delhi: Oxford & IBH Publishing Co.

6. Sundar Rao, P. S. S., 1983. *An Introduction to Bio-statistics.* Vellore, Tamil Nadu: Department of Bio-statistics, Christian Medical College.

7. *Walpole, Ronald, E., 1974. *Introduction to Statistics.* 2nd edition. New York: Macmillan Publishing Co. Inc.

Note: * May be treated as Text Books.

Demographic Methods I

Course Number: **10POPB23C**   Number of Credits: **4 (Four)**

Subject Description:
This course presents the sources of population data and elementary demographic methods.
Goals:
To enable the students to learn the various sources of population data, evaluation of data and elementary demographic methods.

Objectives:
On successful completion of the course the students should have an understanding about (i) various sources of population data, (ii) methods of evaluation of data, (iii) technical aspects of population growth and (iv) features of stable population.

Contents:

Unit I   **Population Census**
Concept, objectives and utility, characteristics of modern population censuses. Planning, Organization and administration of national censuses. History of Census in India and Details of the latest Indian Census. Limitations and Errors, Post Enumeration Checks. Census Publications.

Unit II   **Vital Registration and Other Sources of Data**
Vital Registration: Concept, objectives and utility of vital registration UN-recommendations. History of Civil Registration in India, Organizational set up and items covered in vital statistics in India, limitations. Sample Registration System in India, History, Objectives advantage and limitations. Model Registration System in India; Objectives, coverage, limitations. Large-scale Surveys in India: National Sample Surveys, Mysore Population Study, National Family Health Survey, Service Statistics.

Unit III   **Evaluation of data**
Sources and types of errors and deficiencies in data; General methods of evaluation and detection of errors and deficiencies in data; Evaluation of errors in total count and population components such as age-sex data.
Adjustment of data for errors and deficiencies; Comparison with expected configuration; Interpolation and graduation such as graphic smoothing, moving averages, curve fitting and use of mathematical formula.

Unit IV   **Dynamics of Population Growth**
Balancing equation, rates of population growth; arithmetic, geometric and exponential rates of growth, doubling time, location of events in time; the Lexis diagram; concepts of the cohort and the cross – section. Crude rates and standardized rates.

Unit V   Stable Population
Definition, intrinsic rate of natural increase, intrinsic birth rate and death rates, mean length of generation, net reproduction rate, computation of rate of growth and birth rate of stable population from the fertility and mortality schedules.

References:

Selected sections from the following:

1. *Bhende, Asha A., and Tara Kanitkar, **Principles of Population Studies**, 9th Ed., Mumbai: Himalaya Publishing House, 2000.

2. India, Registrar General, 1986. ***Civil Registration System in India – A Perspective.*** *Census Centenary Monograph No: 4*, New Delhi: Office of the Registrar General.

3. Keyfitz, N., 1968. ***Introduction to the Mathematics of Population.*** Massachusetts: Addison Wesley.

4. Padmanabha, P., 1991. "Organization of Civil Registration and Vital Statistics System in India", ***Registrar General's Newsletter*** 9 (1).

5. *Shryock, Henry, S., Jacob S. Siegel and Associates, 1980. ***The Methods and Materials of Demography.*** New York: U.S. Department of Commerce, Bureau of Census.

6. *Srinivasan, K., 1998. ***Basic Demographic Techniques and Applications.*** New Delhi: Sage Publications.

7. Srivastava, S. C., 1977. ***Indian Census in Perspective.*** *Third Ed., Centenary Monograph No: 1 of 1971.* New Delhi: Office of the Registrar General.

8. Swamy, V. S., 1982. "Sources of Demographic Data", in ***Population of India.*** *Country Monograph Series No: 10.* New York: UN-ESCAP.

9. United Nations, 1954. ***Handbook of Vital Statistics Methods***. ST\STAT\Ser\F.No.7, New York: United Nations.

10. United Nations, 1958. ***Handbook of Population Census Methods***, ***Vol. I.*** *Studies in Methods, Series F. No: 5.* New York: United Nations.

11. United Nations, 1966. ***The Concept of a Stable Population – Application to the Study of Population of Countries with Incomplete Demographic Statistics***. New York: United Nations.

12. Various publications of NSSO, **Sarvekshana**.

Note: * May be treated as Text Books.

Practical - I

Demographic and Statistical Methods - I

Course Number: **10POPB23D**   Number of Credits: **4 (Four)**

Subject Description:
This course describes the practical application of demographic and statistical methods to the population data analysis and presentation.

Goals:
To enable the students to acquire knowledge about basic demographic and statistical methods so as to enable them to apply to the population and statistical analyses.

Objectives:
On successful completion of the course the students should have better comprehension about (i) age-sex pyramid and adjustment of age data, (ii) interpolation and smoothing of age data, (iii) life table construction and population projections, (iv) standardization and stale population techniques, and (v) computation of descriptive statistics. .

Contents:

Unit	I	**Age –Sex Pyramids and Adjustment of Age Data**

Graphical presentation of age distribution and construction of age-sex pyramid: Assessment of digit preference - Computation of Whipple's and Myers indexes, and Computation of age ratios, and U. N. Age-Sex Accuracy Index.

Unit   II   Interpolation and Smoothing of Age Data
Interpolation, graphical, use of mathematical curves; Smoothing of age data – graphical, moving average, graduation using Karup-king, Beers formula.

Unit   III   Life table and Population Growth Rates
Construction of the Life Table: Conventional and Reed-Merril Methods; Computation of linear, geometric, and exponential growth rates of population.

Unit   IV   Standardization and Stable Population
Standardization – direct and indirect methods adjusting for death rates, Computation of NRR, intrinsic rate of natural increase, stable age distribution, birth and death rates.

Unit   V   Descriptive Statistics
Classification of data, frequency distributions, graphical presentation (histogram, frequency curve, ogives), Computation of measures of central tendency; ungrouped and grouped data, and Computation of measures of dispersion.

References:

Selected sections from the following:

1. *Bhende, Asha A., and Tara Kanitkar, 2000. ***Principles of Population Studies.*** 9th Ed., Mumbai: Himalaya Publishing House.

2. Blalock, Jr. Hubert M., 1984. ***Social Statistics.*** 2nd edition. New York: McGraw Hill Book Company.

3. Daniel, Wayne W., 1974. ***Bio-Statistics: A Foundation for Analysis in the Health Sciences.*** New York: John Wiley & Sons Inc.

4. Goon, A. M., M. K. Gupta and D. Das Gupta, 1966. ***Basic Statistics.*** Calcutta: World Press.

5. Keyfitz, N., 1968. ***Introduction to the Mathematics of Population.*** Massachusetts: Addison Wesley.

6. Kurtz, Norman L. R., 1983. ***Introduction to Social Statistics.*** Tokyo: McGraw Hill International Book Company.

7. *Shryock, Henry, S., Jacob S. Siegel and Associates, 1980. ***The Methods and Materials of Demography.*** New York: U.S. Department of Commerce, Bureau of Census.

8. *Snedecor, George, W and William, G. Cochran, 1967. ***Statistical Methods.*** 6th edition. New Delhi: Oxford & IBH Publishing Co.

9. *Srinivasan, K., 1998. ***Basic Demographic Techniques and Applications.*** New Delhi: Sage Publications.

10. United Nations, 1966. ***The Concept of a Stable Population – Application to the Study of Population of Countries with Incomplete Demographic Statistics***. New York: United Nations.

11. *Walpole, Ronald, E., 1974. ***Introduction to Statistics.*** 2nd edition. New York: Macmillan Publishing Co., Inc.

Note: * May be treated as Text Books

Adolescent Issues

Course Number: **10POPB23E**   Number of Credits: **4 (Four)**

Subject Description:
This course presents the basic issues of adolescence.

Goals:
To enable the students to learn the various issues related to adolescence including marriage, fertility, problems during adolescence and policies and programmes for adolescents.

Objectives:
On successful completion of the course the students should have awareness about (i) the basic concepts related to adolescence, (ii) adolescence marriage and fertility, (iii) social, psychological and reproductive health problems of adolescents, (iv) information and counselling needs of adolescents and (v) policies and programmes for adolescents.

Contents:

Unit I   Adolescence and Menarche
Adolescence: Concept and Definition, stages of Adolescence, size and composition of Adolescents in ESCAP, Asia, and India.
Process of growing up in Adolescence: Physical, sexual and emotional changes.
Menarche: Concept, age at menarche, factors affecting age at menarche.

Unit II   Adolescent Marriage and Fertility
Adolescent Marriage; Levels and trends in adolescent marriage in India, factors influencing adolescent marriage.
Adolescent Fertility: Conceptual framework, adolescent fertility in India and States, factors affecting adolescent fertility.

Unit III   Socio-psychological, Economic and Health Issues of Adolescents
Social problems: Drugs and alcohol, violence and abuse, prostitution.
Psychological problems: Depression, suicide, schizophrenia, masturbation.
Economic problems: Drops-outs, unemployment, Street children.
Reproductive Health Issues: Unwanted pregnancy, complications of early pregnancy and child bearing, STD, HIV/AIDS.

Unit IV   Information and Counselling needs of Adolescents
Family Life Education (FLE): Focuses on family and relationships Adolescent Reproductive Health (ARH): Focuses on Reproductive Health needs of Association. Life Skills Education (LSE): Focuses on skills (thinking, social, negotiating) to meet the challenges of life.

Unit V   Policies and Programmes for Adolescents
Health and Welfare Programmes – RCH programme, Wom en and Child Development, Adolescent Education, Youth affairs.
Non-governmental programmes: Empowerment and General competency Income generation, policies against sexual abuse and violence, street children.
Out-reach Programmes –Adolescent / Youth centres for pregnant and parenting youth, multi-service youth centres, youth peer groups.

References:

Selected sections from the following:

1. Govt. of India. ***National Youth Policy – 2000,*** Ministry of Culture, Youth Affairs and Sports, 2000.

2. Mahadevan, K. et al. ***Reproductive Health of Humankind in Asia and Africa: A Global Perspective,*** Delhi: B.R. Publishers, 2000. Chapters 19 & 21-23.

3. PERC. ***Adolescence Reproductive Health Education,*** Chennai University of Madras, Dept. of Adult and Continuing Education, 2001.

4. Reddy, P. J., et al. "Menarche in Adolescent School Girls", ***Reproductive Health, Gender and Development,*** (Eds) P. J. Reddy et al., Delhi: BRPC, 2002, pp. 115-134.

5. Sharma, K. 1999. ***Understanding Adolescence.*** New Delhi: National Book Trust.

6. Tata Institute of Social Sciences. 1002. ***A Compendium on Adolescence Education****,* Mumbai: Dept. of Extra Mural Studies.

7. UNFPA, 2000. ***Adolescents in India: A Profile.*** New Delhi: U N System in India.

8. UNFPA, 2000. ***Adolescent Fertility in India: An analysis based on NFHS data,*** New Delhi: JNU, Centre for the Study of Regional Development, 2000.

Population Economics

Course Number: **10POPB33A**   Number of Credits: **4 (Four)**

Subject Description:
This course intends to impart knowledge about the fundamentals of Economic concepts related to population.

Goals:
To enable the students to realise the different concepts of Economics and their importance in population parameters, so as to understand the inter-relationships between them.

Objectives:
On successful completion of the course the students should have an understanding about (i) basic concepts in Economics I, (ii) population growth and economic development, (iii) basic concepts in manpower and labour force, and (iv) labour force in India.

Contents:

Unit I   **Basic Concepts in Economics**
           Economic goods, wealth, welfare, utility, consumer preference. Indifference curves, law of diminishing marginal utility, law of substitution, Demand, supply, price, income and price elasticity, production: function, factors of production, laws of substitution, Demand, supply, price, income and price elasticity, Production: function, factors of production, laws of return.

Unit II   **Manpower and Labour Force: Basic Concepts**
           Economic Structure of labour force: Industrial and occupational classifications, Age-sex patterns of participation, social, economic, cultural, factors influencing participation. Unemployment and underemployment. Factors influencing manpower supply and patterns. Effects of factor pricing and factor proportions on the labour market. Labour force and migration.

Unit III   **Labour Force in India**
           Measurement of labour force participation in India, Census and NSS data. Changes in concept, structure, levels and trends in labour force participation. Changing occupational structure and its implications. Unemployment and underemployment, problems of skilled labour and employment generation and its problems in India.

Unit IV   **Population Growth and National Income**
           National Income, GDP, GNP, NNP and income distribution, personal, disposable, money, purchasing power parity; Levels and trends in National income and per capita income; Elementary notions of opportunity cost, shadow price and consumer surplus.

Unit V   Population Growth and Economic Development
Concept of development, indicators of development, consequences of population growth for total and per capita income, income distribution, capital formation, size of investment, allocation of resources, size of the labour force and industrialization, Malthusian and Boserupian perspectives.

References:

Selected sections from the following:

1. Cassen, Robert, 1979. ***India: Population, Economy and Society***. Delhi: McMillan Company of India Ltd.

2. Coale A. J., and E. M. Hoover, 1968. ***Population Growth and Economic Development in Law Income Countries.*** Princeton: Princeton University Press.

3. Jhingan, M. L., Bhatt B. K and Desai J. N., 2004. ***Demography.*** Delhi: Vrinda Publications (P) Ltd.

4. Mishra, R. S., 1973. ***Economics of Development***. Bombay: Somaya Publications Pvt. Ltd.

5. Samuelson Paul A. and Nordhaus, W. D., 1976. ***Economics.*** 12th edition. New York: McGraw-Hill Kooakusha Ltd.

6. Smith, Robert et al., 1972. ***Population Economics.*** North Carolina: Duke University Press.

7. Tabah, L., 1975. ***Population Growth and Economic Development in the third World, Vol. 2.*** Dolhain: Ordinal Editions.

8. Todaro, Michal P., 1981. ***Economics Development in the third World.*** New York: P. Longman.

9. United Nations, 1982. ***Population of India. ESCAP Country Monograph Series No. 10.*** New York: U. N.

10. Visaria, P. M., 1996. "Structure of the Indian Workforce, 1961-1994", ***The Indian Journal of Labour Economics*** 39(4).

 * May be treated as Text Books.

Human Ecology, Migration and Urbanization

Course Number: **10POPB33B**   Number of Credits: **4 (Four)**

Subject Description:
This course describes the issues related to human ecology, migration and urbanization.
Goals:
To facilitate the students to learn the different aspects of population and environment and the role of migration in population distribution leading to urbanization.
Objectives:
On successful completion of the course the students should enrich their knowledge about (i) inter-relationship between population and environment, (ii) spatial distribution of population, (iii) different dimensions of migration including theories of migration, and (iv) various aspects of urbanization.

Contents:

Unit   I   Ecology, Environment and Population
Ecology and Ecosystems; Man and Environment from the early history of human lineage; Human impact on agriculture, fisheries, wild life and forestry, and energy and material resources; Population growth and environmental deterioration: Land use, Water pollution, Air pollution, Noise pollution, Depletion of biotic resources, and Ecological imbalance; Effects of Environmental pollution on human beings.

Unit   II   Spatial Distribution of Population
Importance of the study and Measures of density or concentration; Factors affecting the spatial population distribution and temporal changes in them. Population distribution in the World and in India.

Unit   III   Migration

Importance of the study of migration, Basic concepts and definitions; Sources of data and limitations; Types of migration: internal, international, temporary and refugee; Trends and differentials in internal migration in India and its states, and International migration.

Unit   IV   Urbanization
Importance of the study, Basic concepts, Sources of data and limitations, Concept of urban and its definitional change in the Indian censuses, and Measures of degree, tempo and concentration of urban population.
Levels and trends of urbanization in developed and developing countries including India; Process of urbanization and suburbanization, and rural urban continuum; Problems associated with and policies and programmes affecting urbanization in India.

Unit   V   Theories of Migration

Theories of migration: pull and push factors, Ravenstein's laws of migration, Lee's theory of migration, Peterson's typology, Sto uffer's model of intervening opportunities and competing migrants, and Zipf and Kant gravity models.

References:

Selected sections from the following:

1.   Bhende, Asha A. and Tara Kanitkar, 2006. ***Principles of Population Studies***, 13th edition. Mumbai: Himalaya Publishing House.

2.   Bose, Ashish, 1980. ***India's Urbanization 1901-1971***. New Delhi. Tata McGraw-Hill Publishing Company Ltd.

3.   *Ehrlich, Paul R., et al., 1977. ***Ecoscience, Population, Resources and Environment.*** W. N. Freeman and Company San Francisco.

4.   Goldstein, S. and A. Goldstein, 1981. ***Survey of Migration in Developing Countries - A Methodological Review***. Honolulu: East-West Centre.

5.   Goldstein, S. and David F. Sly, 1975. ***Basic Data Needed for the Study of Urbanization.*** Belgium: IUSSP, Ordina Editions.

6.   Kritz, M., Keely, C. B. and S. M. Tomari, ***Global Trends in Migration.*** Centre for Migration Studies.

7.   *Misra B. D. 1995. ***An Introduction to the Study of Population.*** 2nd edition. New Delhi: South Asian Publishers Pvt. Ltd.

8.   Shryock Henry et al., 1973. ***Methods of Materials of Demography***, ***Vol. II.*** Washington D. C.: U. S. Bureau of Census.

9.   *United Nations, 1970. ***Manual IV: Methods of Measuring Internal Migration.*** ST/SOA/ SER.A/47 Population Studies No: 47. New York: U. N.

10.   *United Nations, 1973. ***The Determinants and Consequences of Population Trends. Vol. 1.*** New York: Dept., of Economic and Social Affairs.

11.   United Nations, ESCAP, 1982. ***Population of India.*** *Country Monograph Number 10.* New York: UN-ESCAP.

Note: * May be treated as Text Books.

Advanced Demographic Methods – II

Course Number: **10POPB33C**   Number of Credits: **4 (Four)**

Subject Description:
This course portrays primarily on the estimation of fertility, mortality and migration in addition to population projections through various demographic models (indirect techniques).

Goals:
To facilitate the students to understand the indirect techniques of estimating fertility, mortality and migration as well as projecting population and its sub-groups.

Objectives:
On successful completion of the course the students should develop the skills to learn the techniques and demographic models that are useful for (i) estimating fertility, mortality and migration, and (ii) projecting the total as well as sub-groups of population.

Contents:

Unit   I   Model Life Tables and Fertility Models
Coale and Demeny Model Life Tables, and UN Model Life Tables; Fertility Models: Brass models, Coale–Trussell model, P/F Rat io, Rele method, Bongaarts method and Stable Population model.

Unit   II   Indirect Methods of Estimating Mortality
Chandra-Deming technique, Differencing method, Inter-censual Survival method and Stable Population approach; Methods based on Children Ever Born and Children Surviving to estimate Infant and Childhood mortality.

Unit   III   Indirect Methods of Estimating Fertility
Reverse Survival methods of estimating fertility and Stable Population methods; Estimating fertility from Children Ever Born data, Own Children method of estimating fertility, Estimating fertility from Survey data on Births and Children Ever Born and Current Fertility from Pregnancy histories.

Unit   IV   Measuring Migration
Place of Birth approach, Place of Last Residence approach, Duration of Stay-approach, combinations of the three, Indirect methods of estimating Migration: Growth Rate method, Vital Statistics method, Life Table and Census Survival Ratio methods.

Unit   V   Projections

Population Projections: Issues and principles; Methods of population projections: Mathematical models, Component method, Age-disaggregated method, projection of fertility, mortality and migration, and Auto regression model. Methodology of projecting total population, age-wise population, urban–rural population, labour force population, households and families, and school enrollment; Data requirements and assumptions, and Use of Computer software for different projections.

References:

Selected sections from the following:

1. *Barclay, G. W., 1966. **Techniques of Population Analysis.** 2nd edition. London: J. Wiley & Sons.

2. Coale, A. J. and Demeny, P., 1983. **Regional Model Life Table and Stable Populations.** 2nd edition. New York: Academic Press.

3. ECAFE, Population Division; 1969. **Projections of Population of Sub-National Areas.** *Asian Population Studies Series.* Bangkok: ECAFE.

4. *Pathak K.B. and Faujdar Ram, 1992. **Techniques of Demographic Analysis**. Bombay: Himalaya Publishing House.

5. *Srinivasan K. 1986. **Basic Demographic Techniques and Applications.** New Delhi: Sage.

6. United Nations, 1956. **Manual II: Methods for Population Projections Sex and Age.** New York: United Nations.

7. *United Nations, 1967. **Manual IV: Methods of Estimating Basic Demographic Measures from Incomplete Data.** New York: United Nations, 1967.

8. United Nations, 1971. **Manual V: Methods of Projecting Economically Active Population.** ST/SOA/Series A/A/43, New York: United Nations, 1971.

9. United Nations, 1982. **Model Life Table for Developing Countries.** Population Studies No: 77. Department of International Economic and Social Affairs, New York: U. N.

10. *United Nations, 1983. **Manual X: Indirect Techniques for Demographic Estimation.** Population Studies No: 81, Department of International Economic and Social Affairs, New York: UN, Department of International Economic and Social Affairs, 1983.

11. UN/UNESCO, 1966. **Estimating Future School Enrolment in Developing Countries.** Population Studies Series No: 40, New York: United Nations, 1966.

Note: * May be treated as Text Books.

Practical –II

Demographic and Statistical Methods - II

Course Number: **10POPB33D**   Number of Credits: **4 (Four)**

Subject Description:
This course highlights practical application of demographic and statistical methods to the population data analysis and presentation..

Goals:
To enable the students to acquire knowledge about advanced demographic and statistical methods so as to enable them to apply to the population and statistical analyses.

Objectives:
On successful completion of the course the students should have better comprehension about (i) population projections, (ii) techniques for the estimation of mortality, (iii) techniques for the estimation of fertility, (iv) techniques for the estimation of migration and (v) procedures to compute tests of significance.

Contents:

Unit   I   Population Projections
Population projections: Mathematical methods, Component methods: National Population, rural and urban populations

Unit   II   Techniques for the Estimation of Mortality
Indirect estimation of Mortality: Differencing method, Inter-censal survival, Stable population, and Children born and surviving.

Unit   III   Techniques for the Estimation of Fertility
Indirect estimation of fertility: Reverse survival, P / F ratio, Own children method, Rele method and Use of pregnancy histories.

Unit   IV   Techniques for the Estimation of Migration
Indirect estimation of migration: Growth rate method, Vital statistics method, and Survival ratio method.

Unit   V   Tests of Significance
Tests on means and proportions, one sample and two sample tests, paired sample tests: Tests for association and Correlation, Analysis of variance, one-way and two-way, and Simple linear and multiple regression.

References:

Selected sections from the following:

1. *Barclay, G. W., 1966. ***Techniques of Population Analysis.*** 2nd Edition, London: J. Wiley & Sons.

2. Coale, A. J. and Demeny, P., 1983. ***Regional Model Life Table and Stable Populations.*** 2nd Edition, New York: Academic Press.

3. ECAFE, Population Division, 1969. ***Projections of Population of Sub-National Areas***, *Asian Population Studies Series,* Bangkok: ECAFE.

4. *Pathak K.B. and Faujdar Ram, 1992. ***Techniques of Demographic Analysis***. Bombay: Himalaya Publishing House.

5. *Shryock, Henry, S., Jacob S. Siegel and Associates, 1980. ***The Methods and Materials of Demography.*** New York: U. S. Department of Commerce, Bureau of Census.

6. *Srinivasan, K., 1986. ***Basic Demographic Techniques and Applications.*** New Delhi: Sage Publications.

7. United Nations, 1956. ***Manual II: Methods for Population Projections Sex and Age.*** New York: United Nations.

8. *United Nations, 1967. ***Manual IV: Methods of Estimating Basic Demographic Measures from Incomplete Data.*** New York: United Nations.

9. United Nations, 1971. ***Manual V: Methods of Projecting Economically Active Population.*** ST/SOA/Series A/A/43, New York: United Nations.

10. *United Nations, 1983. ***Manual X: Indirect Techniques for Demographic Estimation.*** *Population Studies No: 81*, Department of International Economic and Social Affairs, New York: U. N, Department of International Economic and Social Affairs.

11. UN / UNESCO, 1966. ***Estimating Future School Enrolment in Developing Countries.*** *Population Studies Series No: 40*, New York: United Nations.

12. United Nations, 1966. ***The Concept of a Stable Population–Application to the Study of Population of Countries with Incomplete Demographic Statistics***. New York: United Nations.

12. Goon, A. M., M. K. Gupta and D. Das Gupta, 1966. ***Basic Statistics.*** Calcutta: World Press.

13. Kurtz, Norman L. R., 1983. ***Introduction to Social Statistics.*** Tokyo: McGraw Hill International Book Company.

14. *Snedecor, George, W and William, G. Cochran, 1967. ***Statistical Methods.*** 6th edition. New Delhi: Oxford & IBH Publishing Co.

15. *Walpole, Ronald, E., 1974. ***Introduction to Statistics.*** 2nd edition. New York: Macmillan Publishing Co. Inc.

Note: * May be treated as Text Books.

Reproductive and Child Health

Course Number: **10POPB33D**   Number of Credits: **4 (Four)**

Subject Description:
This course portrays fundamentals of Reproductive and Child Health and its importance in population control and health programmes.

Goals:
To facilitate the students to learn the different dimensions of reproductive and child health.

Objectives:
On successful completion of the course the students should enrich their knowledge about (i) the concept and scope of reproductive and child health, (ii) reproductive morbidity, and (iii) reproductive health programmes for different special groups of population.

Contents:

Unit   I   Reproductive Health
The Concept, Evolution (ICPD conference), Framework of Reproductive Health, and Reproductive Rights; Anatomy and Physiology of Human Reproduction, Mechanism of Conception and Pregnancy, Methods of Contraception, Effectiveness of methods and Medical Termination of Pregnancy.

Unit   II   Reproductive Morbidity
Gynaeocological Problems: Menstrual problems and Reproductive Tract Infections (RTIs); Obstetrical Problems: Pregnancy Complications, Delivery Complications and Post-natal Problems; Male Reproductive Health Problems, Infertility and Reproductive Technologies such as in-vitro fertilization.

Unit   III   STDs and HIV/AIDS
Sexually Transmitted Diseases (STDs) and HIV/AIDS: Prevalence Rates and Regional Variations in India, Medical and Social Aspects; Commercial Sex Workers and Other Vulnerable Groups; Interventions by Government and Non-governmental Organizations.

Unit   IV   Sexual Behaviour and Reproductive Health Programme Management
Various Forms of Sexual Behaviour, Homosexuality, Extramarital Sex, Adolescent Sexuality and Eunuch; Social and Cultural Determinants of Reproductive Health and Blood Transfusions.
Reproductive Health Programme Management: Community Needs Assessment and Health Seeking Behaviour.

Unit   V   Reproductive Health of Special Groups and Programmes
Focus on Reproductive Health of Special Groups: Commercial Sex Workers,
Truck Drivers, Jail Inmates and Street Children; Policy Issues and Quality of
Care: RCH Programmes in India, Research Studies on Reproductive Heath.

References:
Selected section from the following:

1. Mahadevan, K. et al., 1998. ***Reproductive Health, AIDS Prevention and Development of Women***. Delhi: B.R. Publishers.

2. Padbidri V. G. and S. N. Daftary, 1999. ***Shaw's Text Book of Gynaecology*** . New Delhi: B. I. Churchill Livingstone, pp. 33-45, 214-239 and 351-360.

3. Krishna Menon, M. K. and B. Palaniappan, 1988. ***Clinical Obstetrics.*** Chennai: Orient Longman, pp. 8-23 and 127-192.

4. United Nations, 1975. "Chapter 16", in ***Human Reproduction Student's Study Guide on Biology of Population***. New York: United Nations, pp. 357-379.

Population, Health and Nutrition Education

Course Number: **10POPB43A**   Number of Credits: **4 (Four)**

Subject Description:
This course demonstrates the different aspects of population, health and nutrition education and their importance.

Goals:
To facilitate the students to understand the need, nature and scope of population, health and nutrition education and the methods to impart the same to the needed population.

Objectives:
On successful completion of the course the students should be able to grasp the (i) importance and different dimensions of population, health and nutrition education, (ii) methodologies to impart these to different sub-groups of population and (iii) the importance of communication and its dimensions.

Contents:

Unit   I   Population Education
Concept and Definition, Scope, Need Objectives, and Components of Population Education, Development of Population Education in India and Agencies involved in Population Education. Role of Non-Governmental Organisations and Universities in the Promotion of Population Education Programmes

Unit   II   Health Education
Concepts of Health, Communicable and Non-communicable diseases; Epidemiology of Communicable diseases: Agent, Environment and Host factors, and Sources of Infection and Modes of Transmission, Pathogenesis and Levels of Prevention.
Health Education: Concept, Definition, Objectives, Scope, Principles and Content; Health Education Methods, National Health Programmes in India.

Unit   III   Nutrition Education
Nutrients, their Functions and Sources, Balanced Diet, and Nutritional Deficiency Diseases;   Nutritional Requirement of Special groups: Pregnant and Lactating women and Infant and Children; Social and Cultural Factors affecting Nutrition, Nutritional Programmes in India with special reference to Women and Children.

Unit   IV   Process of   Communication
Basic Elements of Communication; Different approaches: Learning and Adoption processes, and Diffusion of Innovative behaviour. Communication Techniques for Mass, Group and Individual level, Inter-spouse Communication, and Role of audio-visual aids in communication.

Unit   V   Imparting Population, Health and Nutrition Education
Imparting Population, Health and Nutrition Education in the Formal, Informal, Adult and Extension Education systems; Formulation of Objectives, preparation of Instructional Materials and Strategies for Implementation.

References:

Selected section from the following:

1. Dept. of Population Studies, SVU, 1993. ***Readings in Population Education.*** Tirupati: S.V. University.

2. *Kline, David and David Harman, 1976. ***Issues in Population Education.*** Lexington, D.C. Health and Co.

3. MacMahon and Pugh, 1970. **Epidemiology: *Principles and Methods.*** Boston: Little, Brown and Company.

4. Nagda, Sohanlal, et al., 1975. ***Handbook on Population Education.*** Tirupati: S.V. University.

5. *Park, J. E., and K. Park, 2006. ***Text Book of Preventive and Social Medicine.*** Jabalpur: Banarasidas Bhanot.

6. Rogers, E. M., 1973. ***Communication – Strategies for Family Planning.*** New York: Free Press.

7. *Swaminathan, M., 1974. ***Essentials of Food and Nutrition.*** Madras: The Ganesh and Company.

8. Various Volumes of ***Population Reports***, Johns Hopkins University.

Note: * May be treated as Text Books.

Population Policies, Programmes and Evaluation

Course Number: **10POPB43B**　　　　　　　　　Number of Credits: **4 (Four)**

Subject Description:
This course highlights the various aspects of population policies, programes and evaluation.
Goals:
To facilitate the students to learn the different population policies and programmes, and evaluation of family planning programmes with special reference to India.
Objectives:
On successful completion of the course the students should enrich their knowledge about (i) the development of population policy in India and selected other countries, (ii) historical development of family planning programme in India, (iii) demographic evaluation of family planning programmes, and (iv) selected other aspects of programme evaluation.

Contents:

Unit　I　Population Policy
Definition, Types, Process of Policy Formulation and Policy Goals; World Population and Health Conferences: Bucharest, Alma Ata, Cairo and Beijing.
Overview of population policies in various countries such as China, Indonesia, and Singapore.
History of Population Policy in India, National Population Policy 2000, and Policies and/or Legal measures related to Age at Marriage and Health.

Unit　II　Family Welfare Programme Implementation
Organization set up of Family Planning (Welfare) programme at National, State, District, and Primary Health Centre (PHC) levels in India; Approaches: Cafeteria, Extension, Camp, Incentives and Disincentives and Target Setting; Programme Expenditure, and Role of Voluntary Agencies in Family Welfare Programme.

Unit　III　General Principles of Programme Evaluation
Long Term and Short Term Goals, Intermediate Objectives, Assessment of the Effort, Measurement of the Impact, Efficiency of the Components of Programme, Process Evaluation and Ultimate Goal Evaluation.

Unit　IV　Demographic Evaluation of Family Planning Programmes
The Process of Evaluating Family Planning Programmes, Indices of Impact, Computation of Couples Protected, Couple Years of Protection, Births Averted, Sources of Data, and Limitations. Special Studies on Use of Contraception and Acceptor Characteristics: National Family Health Surveys, and Reproductive and Child Health Surveys.

Unit V   Other Aspects of Evaluation
Cost-Benefit Analysis, Experiments and Field Trials, Evaluation of Programme Management, Operations Research, Case Studies, Evaluation of Individual Programme Components; Quality of Services, Effect of Non-Programme Factors, and Programme Personnel and their Characteristics.

References:
Selected sections from the following:

1. *Chandrasekaran C. and Albert I. Harmalin, 1975. ***Measuring the Effect of Family Planning Programme of Fertility***. Belgium: Ordina Edition.

2. *ESCAP, 1987. ***Population Policies and Programmes: Current Status and Future Directions.*** *Asian Population Studies Series No: 84.* Bangkok: ESCAP.

3. Government of India, 2000. ***National Population Policy 2000.*** New Delhi: Ministry of Health and Family Welfare.

4. Fisher, Andrew, John Stoeckel, 1983. ***Handbook for Family Planning Operations Research Design***. New York: The Population Council.

5. Issacs, Stephen L. Gail S. Cairns and Nancy I Heekal, 1983. ***Population Policy***: ***Manual for Policy makers and Planners,*** New York: Columbia University.

6. Jain, Anrudh K., 1992. ***Managing Quality of Care in Population Programmes.*** West Hartford, Com: Kumarian.

7. Miro, Carmen, A. and Joseph, E., Potter, 1984. ***Population Policy: A Fact book.*** New York: The Population Council.

8. *Nortman, Dorothy, 1984. ***Population and Family Planning Programmes: A Fact book***, New York: The Population Council.

9. Roy, T. K. and G. Rama Rao, 1985. ***Introduction of Evaluation of Demographic Impact of Family Planning Programme***, Bombay: Himalaya Publish. House.

10. *United Nations, 1979. ***Manual IX: The Methodology of Measuring the Impact of Family Planning Programme on Fertility, Manual IX.*** *Population Studies, No: 66.* New York: U. N.

Note: * May be treated as Text Books.

Population and Development

Course Number: **10POPB43C**   Number of Credits: **4 (Four)**

Subject Description:
This course exhibits the various aspects of development and its inter-relationship with different aspects of population.

Goals:
To facilitate the students to learn the different aspects of development, man power and relationship of population growth with developmental aspects.

Objectives:
On successful completion of the course the students should enrich their knowledge about (i) the nature and scope of development, (ii) inter-relationship between population growth and development, and (iii) the dimensions of labour force and its importance in development with special reference to India.

Contents:

Unit   I   Basic Concepts in Development
Concept and Indicators of Economic Development, Classical and Harrod-Domar Models of Economic Growth, Approaches to Development, Changing Concept of Development, Emphasis of Distributive Aspect, Social Aspects, Physical Quality of Life Index (PQLI), Human Development Index (HDI), and the Concept of Sustainable Development.

Unit   II   Population Growth and Development
Effects of Change in Population Size, Structure, and Composition on Economic Development and Social Development, and vice-versa. Growth and Development, Marxian, Malthusian and Boserupian Perspectives.

Unit   III   Demographic Aspects of Development
Development and Modernization, Population and Natural Resources, Factors of Production, Socio-economic and Demographic factors influencing Capital Formation; National Income, Per Capital Income, Savings and Investment and Demographic Implications.

Unit   IV   Manpower and Labour Force
Economic Structure of Labour Force: Industrial and Occupational Classifications, Age-sex Patterns of Participation, Social, Economic, Cultural, Factors Influencing Participation, Manpower Demand and Utilization, Unemployment and Underemployment, and Factors Influencing Manpower Supply and Patterns. Effects of Factor Pricing and Factor Proportions on the Labour Market.

Unit   V   Labour Force in India
Measurement of Labour Force Participation in India, Census and NSS Data, Changes in the Concept, Structure, Levels and Trends in Labour Force Participation. Economic Development and Labour Force Participation. Unemployment and Underemployment, and Employment Generation and its problems. Labour Force and Migration, and Brain Drain

References:

Selected sections from the following:

1. *Ansley J. Coale and E.M Hoover, 1958. **Population and Economic Development in Low-income Countries.** New Jersey: Princeton University Press..

2. Asha A. Bhenda and Tara Kanitkar, 2006. **Principles of Population Studies.** 16th edition. Mumbai: Himalaya Publishing House.

3. *Charles P. Kindilberger and Bruce Herrice, 1977. **Economic Development.** London: McGraw Hill Ltd.

4. *Hanumantha Rao, C. H., and P. C. Joshi, 1980. **Reflection on Economic Development and Social Change.** New Delhi: Allied Publishers Pvt. Ltd.

5. Higgins, Benjamin, 1976. **Economic Development.** Delhi: UBS.

6. *Malgarkar, P. D., and V. A. Panandikar, 1982. **Population and Development.** Bombay: Somaiya Publication Pvt. Ltd.

7. Manzoor Alane, S., and G. Ram Reddy, 1978. **Socio-Economic Development Problems in South East Asia.** Bombay: Popular Prakashan.

8. Prasad, K. N., 1983. **Problems of Indian Economic Development National and Regional Dimensions.** New Delhi: Sterling Publishers Private Limited.

9. Rudder Dutt and K. P. M. Sundaram, 1982. **Indian Economics.** New Delhi: Sultan Chand and Co. (P) Ltd.

10. Seth, M.L., 1982. **Principles of Economics.** Agra: Lakshmi Narai Agarwal.

11. Todaro, Michal P, 1981. **Economic Development in the Third World.** New York: P. Longman.

12. United Nations, 1975. **The Determinants and Consequences of Population Trends.** New York: Department of Economic and Social Affairs.

13. *Yves, Bizien, **Population and Economic Development.** New York: Prager Publishers, 1973.

Various *Human Development Reports,   Indian Census Reports*, *World Development Reports.*
Note: * May be treated as Text Books.

Application of SPSS Software for Database Management and Analysis

Course Number: 10**POPB43D**   Number of Credits: **4 (Four)**

Subject Description:
This course presents the functions of SPSS, creation of data files and entry of data, editing of data, and transformation and analysis of data and interpretation.
Goals:
To enable the students to learn the operational functions, analysis of data and interpretation of results.
Objectives:
On successful completion of the course the students should possess the skills to (i) operate SPSS functions, (ii) data entry, editing and transformation of data, and (iii) analysis and interpretation of data.
 Contents:

Unit	**I**	**Introduction**
		SPSS Main Menus and Functions: Operation Commands, Data Definition and Manipulation Commands, Procedure Commands
Unit	**II**	**Creating Data Files in SPSS and Entry of Data**
		Opening Data File, Variables, Values, Variable Labels, Value Labels and Entry of Data. Coding Categories of Variables, Recoding Values, Renaming Variables, Computing Variables, Recode of Variables, Specifying Conditional Transformation, Transformation of Excel File into SPSS format and Merging of Data Files.
Unit	**III**	**Editing Data and Transformation**
		Editing Data in Data View, Identifying Missing Values and Replacement, Restructuring Adding Files, Selecting Cases, Managing Variables, Matching Files: Same Variables and Different Variables; Non-parallel Files: Different Cases and Different Variables. Sorting Data by Variables, Consistency checking: Checking of Range of Codes for Variables; Creating New Variable by Transformation.
Unit	**IV**	**Analysis of Data and Interpretation – I (Practical)**
		Frequency Tables with Selection of Statistics Using Sub-commands - Central Tendency, Charts and Graphs; Cross-tabulation with Selection of Statistics using Sub-commands; Correlation and ANOVA using Sub- commands; and Interpretation of Results Using Computer Output.

Unit   V   Analysis of Data and Interpretation - II (Practical)
Discriminant Analysis, Multivariate Regression Analysis - Linear Regression, Logit Regression, Path Analysis, Factor Analysis and Canonical Analysis. Interpretation of Results Using Computer Output.

References:

1. Cronk, Brain C., 1999. ***How to Use SPSS: A Step by Step Guide to Analysis and Interpretation.*** Los Angeles: Pyraczak Publishing.

2. George, Darren and Paul Mallery, 2006. ***SPSS for Window Step by Step: A Simple Guide for Reference 13.0 Update.*** 6th *e*dition. Boston: Allyn & Bacon.

3. SPSS, I. C., 1988. ***SPSS/PC+ 2.0 Base Manual.*** Chicago: SPSS. Inc.

4. Gaur. S. Ajai and Gaur. S. Sanjaya, 1977. ***Statistical Methods for Practice and Research: A Guide to Data Analysis Using SPSS.*** New Delhi: Sage Publications.

5. Shajahan. S., 2004. ***Research Methods for Management.*** Mumbai: Jaico Publishing House.

Research Project

Course Number: **10POPB47V**   Number of Credits: **8 (Eight)**

Subject Description:

The research project would be done by the students taking up a simple research problem related to different dimensions of population preferably with field based survey.

Goals:

To facilitate the students to develop the skills of conducting and applying the theoretical aspects of research methodology and also the application of various demographic techniques.

Objectives:

On successful completion of the course the students should enrich their understanding of (i) selecting a research problem, review of literature and application of methodological aspects, (ii) collecting and analyzing data related to population and other aspects, and (iii) presenting the findings in a dissertation form.

Contents:

After the completion of the research project, the student is expected to submit a dissertation on the following lines:

> **Introduction**
> **Review of Literature**
> **Research Methodology**
> **Results / Findings**
> **Summary and Implications**

The student is has also facing viva-voce examination (to be conducted by External, Internal Guide and Head of the Department).

Supportive Courses Offered to Other Degree Programmes

Basic Issues in Population

Course Number: **101GS**   Number of Credits: **2 (Two)**

Basic Concepts: Demography, Population Studies, Population size, structure and composition, and spatial distribution.

Components of Population Change: Fertility, Mortality and Migration and their interrelationships. Balancing Equation.

Population Growth and Distribution: History of population growth and distribution around the World and India. Factors responsible for the growth of population.

Population Composition: Age and Sex structure: Measures and factors influencing them. Socio-economic Characteristics: Literacy and Educational attainment Rural-Urban residence, Labour force participation and Occupation - Measures.

Consequences of Population Growth: Population growth and social and economic development in India.

References:

1. *Bhende, A. Asha and Tara Kanitkar, 2000. **Principles of Population Studies.** Mumbai: Himalaya Publishing House.

2. *Misra, B. D. **An Introduction to the Study of Population.** New Delhi: South Asian Publishers Pvt. Ltd., 1995.

3. *United Nations. **The Determinants and Consequences of Population Trends. Vol.** I. ST/SOA/SER.A/SO. Population Studies No. 50. New York, 1973.

4. United Nations. **ESCAP Population of India: Country Monograph Series No. 10.** New York: United Nations, 1982.

Note: * May be treated as Text Books.

Sources of Demographic Data

Course Number: **102GS** Number of Credits: **2 (Two)**

Population Census: Concept, objectives and utility, characteristics of modern population censuses. Planning, Organization and administration of national censuses. History of Census in India

Details of Census and Publications: Details of the latest Indian Census. Limitations and Errors, Post Enumeration Checks. Census Publications and Type Information Available.

Civil Registration System: Concept, objectives and utility of vital registration UN - recommendations. History of Civil Registration in India, Organizational set up and items covered in vital statistics in India, limitations.

Sample and Model Registration System: Sample Registration System in India - History, Objectives, Advantage and Limitations. Model Registration System in India - Objectives, Coverage, and Limitations.

Large-scale Surveys in India: Introduction to National Sample Surveys, National Family Health Surveys, Reproductive and Health Surveys and Service Statistics.

References:

Selected sections from the following:

1. *Bhende, Asha A., and Tara Kanitkar, 2006. **Principles of Population Studies**, 13th edition. Mumbai: Himalaya Publishing House.

2. India, Registrar General, 1986. ***Civil Registration System in India – A Perspective.*** *Census Centenary Monograph No: 4*, New Delhi: Office of the Registrar General.

3. Srivastava, S. C., 1977. ***Indian Census in Perspective.*** *Third Ed., Centenary Monograph No: 1 of 1971.* New Delhi: Office of the Registrar General.

4. Swamy, V. S., 1982. "Sources of Demographic Data", in ***Population of India.*** *Country Monograph Series No: 10.* New York: UN-ESCAP.

5. United Nations, 1954. ***Handbook of Vital Statistics Methods***. ST\STAT\Ser\F.No.7, New York: United Nations.

6. United Nations, 1958. ***Handbook of Population Census Methods***, ***Vol. I.*** *Studies in Methods, Series F. No: 5.* New York: United Nations.

Various **NSS Reports, National Family Health Survey Reports, Reproductive Health Survey Reports and Family Welfare Year Books.**

Note: * May be treated as Text Books.

Population Policies and Programmes

Course Number: **103GS**   Number of Credits: **2 (Two)**

Scope of Population Policy and Programmes
Definition, types, process of policy formulation, policy goals,

Review of Policies in Developed and Developing Countries
Overview of population policies in various countries such as China, Indonesia, Singapore.

Evolution of Population Policy and Programmes in India
History of population policy in India, 1976, 1977 and 2000 and legal measures related to age at marriage and fertility.

Organizational Setup of Family Planning (Welfare) Programme at National, state, district levels and at periphery in India.

Approaches in Implementing Family Planning (Welfare) Programme: Cafetaria, extension, camp, incentives and disincentives, target setting, role of voluntary agencies, other programmes.

References:

1. *Bhende, A. Asha and Tara Kanitkar, 2006. *Principles of Population Studies.* Mumbai: Himalaya Publishing House.

2. Issacs, Stephen L. Gail S. Cairns and Nancy I, Heekal, 1983. *Population Policy: Manual for Policy Makers and Planners,* New York: Columbia University.

3. Miro, Carmen A and Joseph E. Potter, 1984. *Population Policy: A Fact Book,* New York: The Population Council.

4. Nortman, Dorothy, 1984. *Population and Family Planning Programmes: A Fact Book*, New York: The Population council, 1984.

5. ESCAP, 1987. *Population Policies and Programmes: Current Status and Future Directions*. *Asian Population studies Series No. 84.* Bangkok: ESCAP.

Note: * May be treated as Text Books.

Database Management and Analysis Using SPSS

Course Number: **104GS**   Number of Credits: **2 (Two)**

SPSS Main Menus and Functions: Operation commands, Data definition and manipulation commands, Procedure commands

Creating Data Files in SPSS
Data File Types, Opening data file options, Reading Database files, Saving data files

Editing Data
Data View, Variables, Variables View, Editing data in Data view, Identifying missing values and replacement, Consistency checking - checking of range of codes for variables

Data Transformation
Compute Variable, Creating new variable by transformation, Recoding values, Categorize variables, Select Cases, Weight Cases

Elementary Analysis of Data and Interpretation
Working With Command Syntax. Frequencies, Description. Cross tabs, Summarize, Means, Correlations, Chi-Square, t -Tests. One-way Analysis of Variance (ANOVA).

. **References:**

1. Cronk, Brain C., 1999. ***How to Use SPSS: A Step by Step Guide to Analysis and Interpretation.*** Los Angeles: Pyraczak Publishing.

2. Gaur. S. Ajai and Gaur. S. Sanjaya, 1977. ***Statistical Methods for Practice and Research: A Guide to Data Analysis Using SPSS.*** New Delhi: Sage Publications.

3. George, Darren and Paul Mallery, 2006. ***SPSS for Window Step by Step: A Simple Guide for Reference 13.0 Update.*** 6th edition. Boston: Allyn & Bacon.

4. Shajahan. S., 2004. ***Research Methods for Management.*** Mumbai: Jaico Publishing House.

5. SPSS, I. C., 1988. ***SPSS/PC+ 2.0 Base Manual.*** Chicago: SPSS. Inc.

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