

Course Title:	<b>Demography and Official Statistics</b>
Course Code:	<b>BSTA-205</b>
Semester:	<b>IV</b>
Credit Hours:	<b>03</b>

## **Learning Outcomes**

By the end of this course, students will be able to:

1. identify the key concepts of Demography and appropriate sources of data.
2. perform basic demographic analyses using various techniques and ensure their comparability across populations.
3. produce population projections and interpret the information gathered by the different demographic methods.
4. The versatility to work effectively in a broad range of analytic, scientific, government, financial, technical and other positions.
5. A broad overview of the fundamental issues underlying the organization of official statistics.

## **Course Outline**

### **Unit – I**

#### **1.1 Introduction to Demography**

Introduction to Demography and sources of demographic data, Components of population growth, Composition of population and vital events.

#### **1.2 Population Censuses**

The population censuses, Registration of vital events, Use of sampling in collection of demographic data

### **Unit – II**

#### **2.1 Methods of Enumeration and Demographic Surveys**

Demographic surveys and other sources, Methods of enumeration, Demographic concepts and measures.

##### **2.1.1 Analysis of Demographic Surveys**

Current and Cohort methods of description and analysis, Testing the accuracy of demographic data, Types of sources of errors, General testing procedures.

### **Unit – III**

#### **3.1 Distribution and Methods of Standardization**

Testing the accuracy of age and sex data, Checking the accuracy of graphs of single-year distributions, Checking the accuracy of graphed age data.

### 3.1.1 Demographic Measures

Basic demographic measures, Fertility and mortality measures, Total and general fertility rates, Standardized death and birth rates, Gross and net reproduction rates, Infant and maternal mortality rates and their applications to the data related to health/medical sciences.

## Unit – IV

### 4.1 Life Tables

Life tables, Construction of complete and abridged life tables, Graphs of  $1X$ ,  $qX$ , and  $dX$ , Description and uses of life tables columns, Stationary population.

#### 4.1.1 Population Projections and Analysis

Population estimates and projections, Intercensal estimates and postcensal estimates, Components and mathematical methods for intercensal and postcensal estimates.

## Unit – V

### 5.1 Official Statistics

Introduction to official statistics, statistical systems and international standards, set up of national and provincial statistical organizations in Pakistan, its role in development of statistics, working and publications. Sources of official statistics, National Database Registration Authority (NADRA) and its role, Economic Statistics producers, International classification and standards. Use of Statistics in administration and planning concepts and evaluation of GDP, GNP, NNP, balance of Trade and payments. Measurements of income distribution, prices and price mechanisms. Deflation and Inflation of series, Industrial quantum index, National sample surveys and census conducted in Pakistan.

- **Teaching-learning Strategies:**

Class Lecture method, which includes seminars, discussions, assignments and projects. (Audio-visual tools are used where necessary)

- **Assignments-Types and Number with calendar:**

According to the choice of respective teacher.

- **Assessment and Examinations:**

According to the University's Semester Rules.

Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	It takes place at the mid-point of the semester.
2.	Formative Assessment	25%	It is continuous assessment. It includes: Classroom participation, attendance, assignments, and presentations, homework, attitude and behavior, hands-on-activities, short tests, quizzes etc.
3.	Final	40%	It takes place at the end of the semester. It is

	Assessment		mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.
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**Textbooks:**

1. Swanson, D.A., & Siegel, J.S. (2004). *Methods and Materials of Demography* (2<sup>nd</sup> ed.). Emerald Publisher.
2. Farhat, Y. (2020). *Demographic Techniques*. Pergamon Press: New York.

**Suggested Reports:**

1. Hansen M.H. (1980). Progress and Problems in Survey Methods and Theory. Illustrated by the work of U.S. Bureau of the Census, U.S. Department of Commerce; A Monograph.
2. NIPA (1962). Administrative uses of Statistics. NIPA Karachi.
3. Statistical Institute for Asia and Pacific SIAP (1984). Training of Trainers in Statistical Operations and Procedures. Part-I, II UNDP, Tokyo.
4. Statistics Division (1979). Retrospect, Perspective and Prospect. Islamabad.
5. Statistics Division Activity Report (1988-89). Government of Pakistan, Islamabad. \*Various Publications of PBS, State Bank of Pakistan, Ministry of Finance, etc.