Outcome-Based Education (OBE) Curriculum
for
Bachelor of Social Sciences (Honors)

Effective from: 2023-2024 Session

Department of Population Sciences
University of Dhaka

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Title of the Curriculum: Outcome-Based Education (OBE) Curriculum of the Bachelor of Social Sciences (Honors) Program

Part A

1. Title of the Academic Program:
Bachelor of Social Sciences (Honours) in Population Sciences

2. Name of the University:
University of Dhaka

3. Vision of the University:
Create a world-class educational ecosystem that enables individuals to be dynamic human capital and ethical leaders for a sustainable future.

4. Mission of the University:

Missions	Statements
UM 1	***M1: Transformative Education*** Provide transformative education by enabling students to embrace lifelong learning and fostering a sustainable knowledge-based society through the continuous pursuit of scholarship, humanistic values, and technological innovation.
UM 2	***M2: Collaborative Research and Innovation*** Pursue collaborative research and innovation, leveraging partnerships to expand the boundaries of knowledge.
UM 3	***M3: Educational Ecology*** Develop an educational ecosystem that fosters excellence, transparency, inclusivity, and accountability.
UM 4	***M4: Community Engagement*** Engage with stakeholders and communities in building a just, fair, diverse, and sustainable world.
UM 5	***M5: Ethical Responsibility*** Empower students to become ethically responsible global citizens for positive societal impact.
UM 6	***M6: National Heritage*** Instill a deep sense of national heritage and pride in students, upholding historical roots and global connectivity.

5. Name of the Program Offering Entity (Department/Faculty/Institute):
Department of Population Sciences

6. Vision of Program Offering Entity (Department of Population Sciences):
To establish the Department of Population Sciences as an outstanding multidisciplinary national center of excellence in teaching, research, training, and advocacy in shaping population-related policies and actions.

7. Mission of the Department of Population Sciences:
To equip the students of the Department of Population Sciences with multidisciplinary knowledge and skills to meet national and international needs; strengthen professional competencies for the relevant stakeholders by offering tailor-made training; and produce evidence-based knowledge through research and use it for advocacy in formulating policies and programs.

8. Name of the Degree:
Bachelor of Social Sciences (Honours) in Population Sciences

9. Description of the Program:
The Department of Population Sciences under the Faculty of Social Science at the University of Dhaka introduced the Bachelor of Social Science (Honors) in Population Sciences in the 2011-2012 session. The program is for those who plan to specialize and build careers in population-related areas such as demographic analysis and population studies; fertility and reproduction; mortality and morbidity; migration and urbanization; population aging; population, poverty, inequality; gender, population, and development; reproductive and sexual health and reproductive rights; program management and planning; population, health, and development policies; environment and climate change; food security and nutrition; population management and human resource development; and analysis of socio-economic, demographic, and health-related data.

The program aims to train the students with theoretical and practical knowledge and skills in population-related fields. This program teaches students the knowledge necessary for understanding the population and related phenomena, along with basic statistical skills. The program also helps students develop their capability to provide different population policies and programs globally and in Bangladesh. In addition, in the eighth semester of this program, students have the opportunity to complete a research monograph as partial fulfillment of the degree. Here, students can apply their theoretical and practical knowledge at the field level. In this program, students are supposed to conduct their research for a monograph on core population-related issues such as fertility, mortality, and migration, along with related population health, gender issues, aging, developmental, and environmental issues.

The Bachelor of Social Science (Honors) in Population Sciences program is a four-year full-time program with two semesters per academic year. Its maximum completion time is six academic sessions. What makes this program even more enriching is its diverse student body. Each year, 40 students from various countries and regions worldwide can enroll in the program, creating a dynamic academic environment. This international diversity enhances the learning experience and prepares students for a global career in population sciences.

10. Program Educational Objectives (PEOs):

PEOs	Statements
PEO 1	Graduates will integrate knowledge from allied disciplines, creating a unique and comprehensive approach to addressing population issues and challenges.
PEO2	Graduates will develop an in-depth understanding of population dynamics, demographic methods, and statistical techniques, which they can directly apply to analyze and interpret population data in decision-making.
PEO 3	Graduates will possess the skills to design, conduct, and analyze research in population sciences, employing appropriate methodologies and advanced statistical tools to generate meaningful insights.

PEO 4	Graduates will be capable of contributing to formulating, implementing, and evaluating policies and programs that address population-related issues at local, national, and global levels.
PEO 5	Graduates will develop strong communication and leadership skills, allowing them to present complex demographic information clearly and persuasively to various audiences, including policymakers, academics, and the general public.
PEO 6	Graduates will show strong critical thinking and problem-solving abilities, enabling them to tackle complex population challenges and propose innovative, data-driven solutions.

11. Program Learning Outcomes (PLOs):

PLOs	Statements
PLO 1	Demonstrate advanced knowledge of scientific, evidence-based population approaches and global, regional, and national determinants.
PLO 2	Apply demographic concepts and theories to understand multidisciplinary approaches to inform the population, development, and health issues.
PLO 3	Develop research skills using population and health data and apply appropriate analytical methods to formulate evidence-based policies.
PLO 4	Understand existing and emerging population issues and their connections with sustainable development.
PLO 5	Appraise population planning and management-related issues and challenges for global, regional, and national contexts.

12. Mapping the Mission of the University with PEOs

[Types of correlation: 1) NC (No correlation); 2) Weak; 3) Moderate; 4) Strong]

PEOs/UMs	UM 1: Transformative Education	UM 2: Collaborative Research and Innovation	UM 3: Educational Ecology	UM 4: Community Engagement	UM 5: Ethical Responsibility	UM 6: National Heritage
PEO 1: Integrate Knowledge	Strong	Strong	Moderate	Strong	Moderate	Moderate
PEO 2: Population Dynamics	Strong	Strong	Moderate	Moderate	Moderate	Moderate
PEO 3: Research Skills	Strong	Strong	Moderate	Moderate	Moderate	Moderate

PEO 4: Policy and Programs	Moderate	Strong	Moderate	Strong	Moderate	Moderate
PEO 5: Communication and Leadership	Strong	Moderate	Strong	Strong	Strong	Moderate
PEO 6: Critical Thinking	Strong	Strong	Moderate	Moderate	Strong	Moderate

13. Mapping PLOs with the PEOs

[Types of correlation: 1) NC (No correlation); 2) Weak; 3) Moderate; 4) Strong]

PLOs/PEOs	PEO 1: Integrate Knowledge	PEO 2: Population Dynamics	PEO 3: Research Skills	PEO 4: Policy and Programs	PEO 5: Communication and Leadership	PEO 6: Critical Thinking
PLO 1: Advanced Knowledge	Strong	Strong	Strong	Moderate	Moderate	Moderate
PLO 2: Multidisciplinary Approaches	Strong	Strong	Strong	Moderate	Moderate	Strong
PLO 3: Research Skills	Strong	Moderate	Strong	Moderate	Moderate	Moderate
PLO 4: Population Issues and Sustainability	Moderate	Strong	Strong	Strong	Moderate	Strong
PLO 5: Planning and Management Challenges	Moderate	Moderate	Moderate	Strong	Moderate	Moderate

14. Mapping Courses with the PLOs

Course Codes	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
POP 101	☑	☑	☑	☑	
POP 102		☑			
POP 103	☑		☑	☑	☑

POP 104	☑		☑	☑	☑
POP 105	☑	☑	☑	☑	☑
POP 106		☑	☑	☑	
POP 107			☑		☑
POP 108	☑	☑	☑	☑	☑
POP 109	☑	☑	☑	☑	☑
POP 110	☑			☑	☑
POP 201	☑	☑		☑	☑
POP 202	☑	☑	☑		☑
POP 203	☑	☑	☑	☑	☑
POP 203A	☑	☑	☑	☑	☑
POP 204	☑	☑	☑	☑	☑
POP 205	☑	☑	☑	☑	☑
POP 206	☑	☑	☑	☑	☑
POP 206A	☑	☑	☑	☑	☑
POP 207	☑	☑	☑	☑	☑
POP 208	☑	☑	☑	☑	☑
POP 209	☑			☑	☑
POP 301	☑	☑	☑	☑	☑
POP 301A	☑	☑	☑	☑	☑
POP 302	☑	☑	☑	☑	☑
POP 303	☑	☑	☑		☑
POP 304	☑		☑	☑	☑
POP 305	☑	☑	☑	☑	☑
POP 306	☑	☑	☑	☑	☑
POP 306A	☑	☑	☑	☑	☑
POP 307	☑	☑	☑	☑	☑
POP 308	☑	☑	☑	☑	☑

POP 309	☑			☑	☑
POP 401	☑	☑	☑	☑	☑
POP 402	☑	☑	☑	☑	☑
POP 403	☑	☑		☑	☑
POP 404	☑	☑	☑	☑	☑
POP 405	☑	☑	☑	☑	☑
POP 406	☑	☑	☑	☑	☑
POP 407	☑		☑	☑	☑
POP 408	☑	☑	☑	☑	☑
POP 409	☑	☑	☑	☑	☑
POP 410	☑			☑	☑

Part B

15. Structure of the Curriculum

a) Duration of the program: Four Years
b) Admission Requirements: The university authority maintains admission into the Department of Population Sciences. Therefore, the eligibility criteria may vary from year to year. However, the information related to admission is available at the following website link: http://admission.eis.du.ac.bd/
c) As per the University Rules
d) Total minimum credit requirement to complete the program: 132
e) Total class weeks in a Year/semester: Fifteen Weeks Per Semester
f) Minimum CGPA requirements for graduation: 2.25
g) Maximum academic years of completion: Six
h) Category of Courses:
    i) General Education Courses: 6
    ii) Core Courses: 30
    iii) Elective Courses: None
    iv) Internship/Thesis/Project/Research Monograph/Portfolio: 1
    v) Comprehensive (Written and Oral): 2

16. Year/Level/Semester/Term-wise Distribution of Courses:

Required Credit Hours: 132
Distribution of Credits

General Education Courses	6	24 Credits
Core Courses	30	96 Credits
Elective	None	
Research Monograph	1	4 Credit
Comprehensive (Written and Oral)	2	8 Credits
Total	**40**	**132 Credits**

Year	**1**	**Semester**	**1**	
Course Code		**Course Title**		**Credits**
POP 101		Introduction to Population Sciences		4
POP 102		Introduction to Sociology and Anthropology		4
POP 103		Introduction to Economics		4
POP 104		Introduction to Political System and Governance		4

Year	1	Semester	2	
Course Code		**Course Title**		**Credits**
POP 105		Social Psychology		2
POP 106		Family Demography		4
POP 107		Social Sciences Research Methodology -I		4
POP 108		Basic Mathematics		2
POP 109		Population, Environment, and Sustainable Development		4
POP 110		Viva-Voce		1

Year	2	Semester	1	
Course Code		**Course Title**		**Credits**
POP 201		Fertility and Reproduction		4
POP 202		Population and Gender		4
POP 203		Statistics for Population Sciences I		3
POP 203A		Statistics for Population Sciences (Lab) I		1
POP 204		Social Sciences Research Methodology -II		4

Year	2	Semester	2	
Course Code		**Course Title**		**Credits**
POP 205		Morbidity and Mortality		4
POP 206		Statistics for Population Sciences II		3
POP 206A		Statistics for Population Sciences (Lab) II		1
POP 207		Population and Development		4
POP 208		Migration and Mobility		4
POP 209		Viva-Voce		1.0

Year	3	Semester	1	
Course Code		**Course Title**		**Credits**
POP 301		Techniques of Population Analysis I		3
POP 301A		Techniques of Population Analysis (Lab) I		1
POP 302		Urbanization, Urban Planning, and Development		4
POP 303		Mixed Methods Research Design, Data Analysis, and Report Writing		4
POP 304		Social and Behavior Change Communication		4

Year	3	Semester	2	
Course Code		**Course Title**		**Credits**
POP 305		Population Ageing		4
POP 306		Techniques of Population Analysis II		3
POP 306A		Techniques of Population Analysis (Lab) II		1
POP 307		Sexual and Reproductive Health and Rights		4
POP 308		Principles of Epidemiology		4
POP 309		Viva-Voce		1.0

Year	4	Semester	1	
Course Code		**Course Title**		**Credits**
POP 401		Population Dynamics of Bangladesh		4
POP 402		Proposal Development for Research Monograph		2
POP 403		Population, Poverty, and Inequality		4
POP 404		Project Management, Monitoring, and Evaluation		4
POP 405		Population Estimations and Projections		2

Year	4	Semester	2	
Course Code		**Course Title**		**Credits**
POP 406		Population and Health Policies and Programs in Bangladesh		4

Year	**4**	**Semester**	**2**	
POP 407		Climate Change, Vulnerability, and Adaptation		4
POP 408		Research Monograph		4
POP 409		Comprehensive (Written)		4
POP 410		Viva-Voce		1.0

Part C

17. Description of All Courses of the Program:

First Year First Semester

Course Code: POP 101 **Course Title:** Introduction to Population Sciences

Credits: 04 **Course Type:** Core

Rationale of the Course: This course introduces the fundamental concepts of population science and is designed to help students understand the basic principles of population processes that contribute to population change. Students will explore the dynamic interplay between population dynamics, demographics, and societal changes. Topics include population growth, migration, fertility, mortality, and the impact of population trends on social, economic, and environmental aspects. This course covers how human populations change and the causes and consequences of these changes.

Course Learning Outcomes:

CLO 1	**Remember** and define the major concepts in demography, including population composition, fertility, mortality, migration, and nuptiality, as well as demographic data types and sources such as census, vital statistics, surveys, and demographic surveillance systems.
CLO 2	**Understand** the multidisciplinary nature of demography and population sciences as scientific disciplines and explain their importance and relevance to understanding societal, economic, and environmental changes.
CLO 3	**Apply** theoretical perspectives such as the Malthusian, Marxian, and demographic transition theories to analyze population dynamics, growth, and its components, and utilize demographic data to analyze patterns of population composition and migration.
CLO4	**Analyze** demographic drivers such as declining mortality and fertility, migration patterns, and nuptiality with their measures.
CLO 5	**Evaluate** the consequences of population growth and the impact of demographic changes on social, economic, and environmental factors and critique theories such as the demographic transition theory and their applicability in different global contexts.
CLO 6	**Create** models or frameworks to understand the relationship between population patterns and societal changes in different cultural contexts by synthesizing information from various demographic sources.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑				
CLO 2		☑			
CLO 3		☑			
CLO 4		☑			
CLO 5	☑			☑	
CLO 6			☑		

Course Content:

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction:** Definition: Demography, Population Studies-Type I & II, Population Sciences. Nature of Demography/Population Sciences: Demography/Population Sciences as a Scientific Discipline. Importance of Demography/Population Sciences.	8	CLO 1 CLO 2
2.	**Types and Sources of Demographic Data:** Census-Census Definition, Essential Features of Census, Errors in Conducting Census-Coverage Error and Content Error, Measures of Coverage Error-Demographic Analysis and Dual-System Estimation, Survey, Vital Statistics Registration System, Population Registers, Population Estimates, Demographic and Health Surveys, Demographic Surveillance Systems.	4	CLO 1 CLO 6
3.	**Demographic/Population Perspective:** Premodern Population Doctrines, The Prelude to Malthus, The Malthusian Perspective-Causes of Population Growth, Consequences of Population Growth, Avoiding the Consequences, Critique of Malthus, Neo-Malthusians. The Marxian Perspective-Causes of Population Growth, Consequences of Population Growth, Critique of Marx. The Theory of the Demographic Transition-Critique of the Demographic Transition Theory, Reformulation of the Demographic Transition Theory, The Theory of the Second Demographic Transition.	6	CLO 3 CLO 4 CLO 5
4.	**Population Change/Population Growth and Its Components:** History of World Population Growth, Levels and Trends of Population Growth-Global, Regional, National - Future Scenario. How Fast Is the World's Population Growing Now? The Power of Doubling—How Fast Can Populations Grow? Why Was Early Growth So Slow? Why Are More Recent Increases So Rapid? How Many People Have Ever Lived?	4	CLO 4 CLO 5

5.	**Population Composition:** The Demographic Variables: What Is Age Transition? The Concepts of Age and Sex - Age Stratification, Age Cohorts and Cohort Flow, Gender and Sex Ratios, The Feminization of Old Age. Age and Sex Composition, Age-Sex Pyramid – Use of Population Pyramid, Pyramid Components, Types of Population Pyramid-Stable, Stationary, Expansive, and Constrictive Pyramid, How to Read a Population Pyramid? Patterns of Population Growth and Population Pyramid. Demographic Drivers of the Age Transition - The Impact of Declining Mortality, The Impact of Declining Fertility, Where Does Migration Fit In? Demographic Dividends—Age Transitions at Work, The Progression from a Young to an Old Age Structure, Youth Bulge—Dead End or Dividend? Demographic Dividends in Bangladesh. The Life Course and Population Aging - What Is Old? The Third Age (Young-Old) and Fourth Age (Old-Old), Centenarians—The Oldest of the Old-Old.	6	CLO 4
6.	**Fertility:** Concepts Related to Fertility: Fertility, Fecundity, and Fecundability. What Is Fertility Transition? How High Could Fertility Levels Be? The Biological Component, The Social Component. Basic Measures of Fertility. How Do We Measure Changes in Fertility? Period Measures of Fertility, Cohort Measures of Fertility. Fertility Level in Different Societies. Why High Birth Rates Are So Low? The Proximate Determinants of Fertility.	8	CLO 4
7.	**Mortality:** Mortality and Morbidity. Lifespan and Longevity. Causes of Death: Communicable, Non-Communicable, and Injuries. Basic Mortality Measures—CDR, ASDR, CSDR, IMR, NMR, PNMR, Child Mortality, Under-Five Mortality, Maternal Mortality. Mortality Differentials. Levels and Trends of Mortality.	6	CLO 4
8.	**Migration:** Population Distribution and Migration. Factors Responsible for Uneven Population Distribution-Geographic Factors, Economic and Social Factors, and Demographic Factors. Defining Migration -Internal Migrants, International Migrants, Stocks versus Flows. Measuring Migration. Why Do People Migrate? Migration Selectivity, Selectivity by Age, Selectivity by Gender, The Push-Pull Theory, A Conceptual Model of Migration Decision Making. Internal Migration. Forced Migration, Refugees and Internally Displaced Persons.	6	CLO 4
9.	**Nuptiality:** Definition-Marital Status and Mate Selection. Differential Marriage Patterns-European vs non-European	6	CLO 4
		Total = 60 Hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)
The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources
Textbooks

1. Weeks, J.R. 2021. Population: An Introduction to Concepts and Issues (13th Edition). Boston, MA: Cengage Learning.

Reference Books

1. Bongaarts, J. 1975. Why are High Birth Rates So Low? Population and Development Review, Vol. 1, No. 2 (Dec. 1975), pp. 289-296.
2. Bongaarts, J. A Framework for Analyzing the Proximate Determinants of Fertility. Population and Development Review. Vol. 4, No. 1 (March 1978), pp. 105-132.
3. Davis, K. & Blake, J. 1956. Social Structure and Fertility: An Analytical Framework. Economic Development and Cultural Change. Vol. 4, Bo. 3 (Apr 1956), 211-235.
4. Kammeyer, K.C.W. 1971. An Introduction to Population. London: Chandler Publishing Company.
5. Kirk, D. (1996). Demographic Transition Theory. Population Studies, 50 (1996), 361-387.
6. Lesthaeghe, R. (1995). The second demographic transition in Western countries: An interpretation. Gender and family change in industrialized countries, 17-62.
7. Lesthaeghe, R. (2010), The Unfolding Story of the Second Demographic Transition. Population and Development Review, 36: 211-251.
8. Shryock, H.S. & Siegel, J.S. 1976. The Methods and Materials of Demography. London: Academic Press.
9. United Nations. 1973. Determinants and Consequences of Population Trends. New York: United Nations.
10. Van de Kaa, D. J. (2003). Second demographic transition. Encyclopedia of population, 2, 872-875.
11. Zaidi B, Morgan SP. (2017). The Second Demographic Transition Theory: A Review and Appraisal. Annu Rev Sociol. 43: 473-492.

Other Resources (Online Resources or others)

Course Code: POP 102 Course Title: Introduction to Sociology and Anthropology

Credits: 04 **Course Type:** GED

Rationale of the Course: This introductory course will introduce the elementary issues of the two major social sciences disciplines, sociology and anthropology. Students will be familiar with the primary concepts of the elements of society and culture. The course aims to facilitate students with the basic introductory issues of sociology and anthropology so that students can later relate the multidimensional population issues in the broader socio-cultural context with this basic understanding.

Course Learning Outcomes:

CLO 1	**Remember** and conceptualize the sociological and anthropological contexts, the socio-economic and political context of the origin and development of sociology and anthropology, and the disciplines' definition, nature, and scope regarding their basic and contemporary approaches.
CLO 2	**Understand** the basic elements of society, such as social structure, status, roles, groups, and institutions; the holistic perspective of culture; and the ecological, functional, and conflict approaches to culture.
CLO 3	**Apply** the conceptualization of the very basic concepts of society and culture to critically understand and explain the process of becoming a social and cultural being.
CLO 4	**Analyze** society regarding the unequal distribution of power, property, and prestige and its causes and consequences in different theoretical frameworks.
CLO 5	**Evaluate** the major social institutions like family, marriage, and religion regarding their origin, evolution, and functions.
CLO 6	**Create** a self-understanding and interpretation of society and culture from a broader perspective, which will later help to understand the complex relationship between society and the population.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1		▪			
CLO 2		▪			
CLO 3		▪			
CLO 4		▪			
CLO 5		▪			
CLO 6		▪			

Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	The Sociological and Anthropological Perspective; Origin and Development of the discipline; Definitions, Nature, Scope and Uses of Sociology and Anthropology; Sociology and Anthropology and other Social Sciences; Methods in Sociology and Anthropology	10	CLO 1, CLO 6
2.	Early Sociological Thought-Classical Thinkers; Contemporary Sociological Approaches-Functionalist Perspectives, Conflict Perspective, Interactionist Perspectives; Anthropological Approaches-Holistic Perspective, Comparative Perspective, Relativistic Perspective	8	CLO 1, CLO 6
3.	Social Structure: Statuses, Roles, Groups, Institutions; Types of Societies: Hunting and Gathering Societies, Pastoral Societies,	8	CLO 2, CLO 6

	Horticulture Societies, Agricultural Societies, Industrial Societies, Postindustrial Societies, Lewis Henry Morgan's Theory of Civilization		
4.	Definition of Culture, Content of Culture, Culture and Civilization, Variation among Cultures: The Ecological Context, A Functionalist Approach, A Conflict Approach, Cultural Universals, Ethnocentrism, Cultural Relativism, Variations within culture: Real Culture and Ideal Culture, Subculture and Counterculture, Cultural Change, Cultural Diffusion and Acculturation, Cultural Lag	8	CLO 2
5.	Socialization, Sociobiology, and the nature-nurture debate; Major Theories of Socialization: Sigmund Freud, Charles Horton Cooley, George Herbert Mead, Erik H. Erikson, Methods of Socialization, Agents of socialization, The Life Course: Childhood, adolescence, mature adulthood, old age, death	8	CLO 3, CLO 6
6.	Conceptualizing social stratification; characteristics of social stratification; Major forms of social stratification: Slavery, Caste, estate, class, status; Major theories of social stratification: Marxian, Weberian, and Functionalist.	6	CLO 4, CLO 6
7.	Definitions, Origin of Family and Marriage, Types of Family, Marriage, and kinship, Functions of Family, marriage and kinship, Changing structure of family, marriage and kinship and its future	6	CLO 5, CLO 6
8.	Definition, Origin of religion: Fear theory, animism, animatism, magic and religion, Religion: Functionalist approach, Conflict approach, Functions of religion, Religion and social change, Religion and geography	6	CLO 5, CLO 6
		Total = 60	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑	☑	☑	☑	☑
Understand	☑		☑	☑	☑	☑
Apply	☑		☑	☑	☑	☑
Analyse	☑		☑	☑	☑	☑
Evaluate	☑		☑	☑	☑	☑
Create	☑		☑	☑	☑	☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is

between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

1. Robertson, Ian. 1988. Sociology (3rd Edition). Worth Publishers, Inc.
2. Giddens, A. 2001. Sociology (4th Edition). Cambridge: Polity Press.
3. Kottak, C. P. 2002. Anthropology: The Exploration of Human Diversity (9th Edition). McGraw Hill Companies, Inc.

Reference Books

1. Haviland, W.A. 1978. Cultural Anthropology. Holt, Rinehart, and Winston
2. Hughes, M. and Kroehler, C. J. 2005. Sociology: The Core (7th Edition). New York: McGraw Hill
3. James Peoples and Garrick Bailey. 2000. Humanity: An Introduction to Cultural Anthropology (5th Edition) . Wadsworth/Thomson Learning
4. Mills, C. Right. 2000. The Sociological Imagination, Oxford University Press, Inc.
5. Berger, P. 1986. Invitation to Sociology. London: Penguin
6. Bobb, C. B. 2000. Sociology: An Introduction. Orlando: Harcourt Brace & Company
7. Fulcher, J. and Scott, J. 1999. Sociology. Oxford: Oxford University Press
8. Schaefer, R.T. 2001. Sociology (7th Edition). New York: McGraw-Hill.

Other Resources (Online Resources or others):

Course Code: POP 103 Course Title: Introduction to Economics

Credits: 04 **Course Type:** GED

Rationale of the Course: This course provides an overview of economics. This introductory course will introduce the students to fundamental economic principles utilized in consumer choice and production theory and their applicability to contemporary economic issues and challenges. The course will start with the basic principles of economics, the production possibility frontier, scarcity of resources, opportunity cost, fundamental tools of supply and demand, elasticity, and its application. Furthermore, this course includes the topics of consumer behavior, production function, market structures, and key macroeconomic indicators, as well as their interrelationships. Finally, students will engage in stimulating discussions and analytical exercises to deepen their understanding of the economic landscape.

Course Learning Outcomes:

CLO 1	**Remember** the fundamental economic principles and the concept of choice when analyzing how individuals, firms, and governments allocate resources to address scarcity.
CLO 2	**Understand** the factors that determine demand and supply in a market and analyze the interaction of demand and supply in markets, determining price and quantity equilibrium and predicting market outcomes.
CLO 3	**Apply** the knowledge to assess consumer behavior and decision-making processes, incorporating preferences, budget constraints, and utility maximization principles.
CLO 4	**Analyze** the relationship between production, costs, and firm behavior, applying cost analysis and optimization strategies to maximize profitability.
CLO 5	**Evaluate** different market structures and their implications for efficiency, firm behavior, and market outcomes, considering perfect competition, monopoly, and oligopoly.
CLO 6	**Create** policy decisions and guidance by understanding key macroeconomic indicators and their interrelationships and analyzing their significance in measuring economic performance.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑	☑			
CLO 2		☑			
CLO 3		☑			
CLO 4		☑			
CLO 5	☑	☑			
CLO 6					☑

Course Content:

SL.	Contents	Hours	Alignment to CLO
1.	Fundamental Concepts of Economics: Scarcity and Efficiency, Choice and Opportunity Costs, Inputs and Outputs, Two Simple Models—The Circular Flow and The Production Possibilities Frontier, The Three Problems of Economic Organization And how these Problems can be solved, Distinguish between Microeconomics and Macroeconomics,	10	CLO 1

SL.	Contents	Hours	Alignment to CLO
	The Difference Between Positive and Normative Statements, Ten principles of economics (How people make decisions; How people interact; How the economy as a whole works).		
2.	Demand and Supply: The Law of Demand, the Demand Curve, Individual and Market Demand, Factors Affecting the Demand Curve, Shifts vs. Movement along the Demand Curve, Elastic and Inelastic Demand; The Law of Supply, the Supply Curve, Factors affecting the Supply Curve, Shifts vs. Movement along the Supply Curve, Elasticity of Supply.	10	CLO 1 CLO 2
3.	Market Equilibrium: Interaction of Demand and Supply, Effect of a Shift in Demand on Equilibrium Price and Quantity, Effect of a shift in Supply on Equilibrium Price and Quantity.	6	CLO 2 CLO 5
4.	Consumer Behavior: Choice and Utility, Marginal Utility and the Law of Diminishing Marginal Utility, Relationship of Total and Marginal utility, Substitution Effect and Income effect, The Paradox of Value, Consumer Surplus, Indifference Curve Analysis- Assumptions and Properties, Economic Explanation of the Convexity of the Shape of Indifference Curve, Normal Good and Inferior Good, Budget Line or Constraint and Determination of Consumer Equilibrium.	8	CLO 1 CLO 3 CLO 4
5.	Production: The Production Function, Total, Average, and Marginal Product; the Law of Diminishing Returns; Returns to Scale (Constant, Increasing, and Decreasing Returns to Scale, Short Run and Long Run; Technological Change (Process Innovation, Product Innovation).	6	CLO 1 CLO 4
6.	The Costs of Production Analysis: Total Revenue, Average Revenue, Marginal Revenue, Total Cost (Fixed and Variable cost), Marginal Cost, Relationship between Total and Marginal Cost, Average Cost (Average Fixed and Variable Cost), Profit.	6	CLO 4
7.	Market Structure and Price Determination: Concepts of Market, Perfectly Competitive Market, Monopoly, Oligopoly, Monopolistic Competition.	8	CLO 2 CLO 5
8.	Measuring a Nations Income and the Cost of living: Concept of National Income, National Income at Current and Constant Prices, The Economy's Income and Expenditure (The Circular-Flow Diagram), Gross National Product, Gross Domestic Product (GDP), Components of GDP, Real versus Nominal GDP, The GDP Deflator, GDP and Economic Wellbeing, International Differences in GDP and The Quality of Life, Consumer Price Index, Producer Price Index, Inflation rate, Real and Nominal Interest Rate.	6	CLO 1 CLO 6
		Total = 60 Hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation

Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	**Final Exam**				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

1. Mankiw, N. G. (2004). Essentials of Economics, 6th Edition. Thomson/South-Western Cengage Learning.
2. Samuelson, P., & Nordhaus, W. (2009). Economics, 19th Edition. McGraw Hill.
3. Gregory, M. N. (2007). Principles of Economics, 3rd Edition. Mason: South–Western Cengage learning.

Reference Books (Textbooks)

Other Resources (Online Resources or others)

Course Code: POP 104 Course Title: Introduction to Political System and Governance

Credits: 04 **Course Type:** GED

Rationale of the Course: This course provides an introductory overview of the classifications, theories, purposes, and applications of each basic concept of political institutions and governance. The student will learn about state, government, and governance theories. The course also prepares students for further study in understanding the link between political institutions and the population of other classes in the 4-year curriculum by providing conceptual and analytical tools appropriate to the field.

Course Learning Outcomes:

CLO 1	**Remember** and define the basic concepts of politics, state, forms of state and government, political institutions, governance, and related concepts.
CLO 2	**Understand** the nature of government and politics and the general scope of political institutions and governance.
CLO 3	**Apply** ideas such as the nature of the state, sources of power, patterns of politics and government, forms of governance, governmentality, political ideologies practiced in the political landscape, nature of electorates, and political parties in the context of Bangladesh.
CLO 4	**Analyze** and compare the traditional idea of the state as a political institution with the modern domain of other political institutions that may have a huge impact on day-to-day public life.
CLO 5	**Evaluate** the changing nature of the state, political institutions, and governance concerning globalization, market liberalization, geopolitics, and non-state actors' dominance in the domestic and international arena.
CLO 6	**Create** further knowledge of public affairs with respect to Bangladesh and get equipped with the necessary knowledge for future professions such as academics, researchers, bureaucrats, and politicians.

Mapping Course Learning Outcomes to Program Learning Outcomes

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑				
CLO 2	☑			☑	
CLO 3			☑		
CLO 4			☑		
CLO 5	☑				☑
CLO 6			☑		

Course Contents:

SL	Contents	Hours	Alignment to CLO
1	The State as Political Institution: Concept, Elements, Theories of the Origin, Development and Purpose; Sovereignty: Meaning and Characteristics Population and State	8	CLO1
2	Organs of Government: Legislature and Its Importance and Functions, Delegated Legislation, Legislative Process and Power, Unicameral and Bicameral Legislature, Declining Power of the Legislature. Executive and Its Kinds and Functions, Growing Power of the Executive. Judiciary and Its Functions and Importance, Judicial Independence, Population, and Rule of Law	10	CLO2
3	Constitution: Definition and Classification, Methods of Establishing Constitution, Characteristics of a Good Constitution, Constitutionalism and Constitutional Government, Supremacy of the Constitution, Amending Process Constitutional Framework of Bangladesh and Its Administration: Working of Political Executive, President, Prime Minister, Cabinet or Ministers, Rules of Business.	10	CLO1 CLO 2
4	Forms of Government: Democratic, Dictatorial, and Totalitarian. Forms of Governance: Parliamentary and Presidential, Constitutional Government. Forms of State: Unitary and Federal. Federalism: Its Problems and New Trends	6	CLO2
5	Governance: Its Forms and Traits, Good Governance, Governmentality, Challenges of Good Governance in Bangladesh	8	CLO3 ClO4
6	Electorate: Role and Functions, Universal Adult Franchise, Franchise for Women, Joint Electorate.	4	CLO2
7	Political Parties in Bangladesh: Historical development, Leadership, Social Bases, Structure, Ideology-Program, Factionalism and Conflict Resolution, Electoral Behavior, Party-Government Relationship, Party in Opposition, Alliances and Inter-Party Relationship	8	CLO2 CLO6
8	Bureaucracy: Nature and Concept, Characteristics of Weberian Ideal Type of Bureaucracy, Recent Trends of Bureaucracy and Public Affairs	6	CLO1 CLO4 CLO6
		Total = 60 Hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	

Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	**Final Exam**				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

Rhodes, R. A. W. Binder, S. A. and Rockman, B. A. Ed. 2006. The Oxford Handbook of Political Institutions, Oxford University Press.

Reference Books:

Acemoglu, D. and Robinson, J. A. 2005. *Economic Origins of Dictatorship and Democracy*. Cambridge University Press.

Besely, T. 2006. *Principled Agents? The Political Economy of Good Government*. Oxford University Press.

Dahl, R. 1991. *Democracy and Its Critics*, 1991, Yale University Press.

Finer, H. 1971. Theory and Practice of Modern Government, Praegar.
Garner, J.W. 2018. *Introduction to Political Science: A Treatise on the Origin, Nature, Functions, and Organization of the State*, Creative Media Partners.
Gettell, R.G. 2019. *Introduction to Political Science*, Alpha Editions.
Gilchrist, R.N. 2019. *Principles of Political Science*, Alpha Editions.
Lasswel, H.D. 1950. *Politics: Who Gets, What, When and How*, Peter Smith Pub Inc.
MacIver, R. 2006.*The Modern State*, Hesperides Press.
Niskanen, W., 1971. *Bureaucracy and Representative Government*. Aldine, Chicago.
Shah, G. 2019. *Democracy, Civil Society and Governance*, Sage Publication: New Delhi

Other Resources (Online Resources or Journal Articles)

Borooah, V. K., and Paldam, M., 2007. Why is the world short of democracy? A cross-country analysis of barriers to representative government. *European Journal of Political Economy* 23:582–604.
Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R., 1999. The quality of government. *Journal of Law, Economics and Organization* 15:222–79.
Djankov, S., McLiesh, C., Nenova, T., and Shleifer, A., 2003. Who owns the media? *The Journal of Law and Economics* 46:341–82.
Leeson, P. T., 2008. Media freedom, political knowledge, and participation. *Journal of Economic Perspectives* 22:155–69.

First Year Second Semester

Course Code: POP 105 Course Title: Social Psychology

Credits: 02 **Course Type:** GED

Rationale of the Course: Social psychology is a discipline that looks to comprehend individuals' cognitive processes about their self-perception and the broader social context in which they exist, encompassing interpersonal relationships and many environmental factors. The phenomenon of motivation towards certain behaviors within social contexts is a topic of inquiry within social psychology. This course aims to offer opportunities for the acquisition of specific abilities that are not only valuable in the context of studying, comprehending, and influencing human behavior but also applicable to other domains of life.

Course Learning Outcomes:

CLO 1	Remember key social psychological terms, concepts, and theories and discuss their application.
CLO 2	Understand foundational theories and concepts in social psychology and their significance in understanding human behavior.
CLO 3	Apply social psychological principles to analyze and explain everyday social interactions and behaviors.
CLO 4	Analyze complex social phenomena by breaking them into constituent elements and assessing the factors influencing social behavior.
CLO 5	Evaluate the effectiveness and relevance of social psychological theories and findings in addressing contemporary social issues and challenges.
CLO 6	Create a comprehensive intervention program based on social psychological principles to address contemporary social and population-related issues, including a plan for implementation and assessment.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑				
CLO 2	☑	☑			
CLO 3	☑	☑			
CLO 4			☑		
CLO 5				☑	☑
CLO 6				☑	☑

Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	Definition, nature, and scope of social psychology, Historical background of social psychology as a discipline Relationship of social psychology with different social sciences	5	CLO 1 CLO 2
2.	The cognitive self: The self-concept, The feeling self, self-esteem. The social self: the role of the social situation, social learning theory, evaluating self through the lens of a social psychologist	7	CLO 1 CLO 2
3.	Formation of initial impression, Social and cultural determinants of perception, Individual differences in perception of the person	5	CLO 3
4.	Exploring Attitudes, changing attitudes through perception, changing attitudes by changing behavior, Linking attitudes, behavior, and persuasion	5	CLO2 CLO 3
5.	Understanding social groups, Performances in groups, Theories of social interaction: Similarity, Reinforcement, Complementary and Exchange theory, social identity and intergroup relations	5	CLO 4 CLO 5 CLO 6
6.	Health Behavior: Seeing through the lens of social psychology, Interlinkage among attitude, beliefs, and behavior related to health	3	CLO 4 CLO 5 CLO 6
		Total = 30 Hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑	☑		☑	☑
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate						☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

1. Stangor, C., Jhangiani, R., Tarry, H. (2011). Principles of Social Psychology. University of Maryland. (Chapter 1: Page 8-56)
2. Hogg, M.A., Vaughan, G.M. (2010). Essentials of Social Psychology. Pearson Education Limited, England. (Chapter 1: Page 1-23)
3. Stroebe, W. (2000). Social Psychology and Health. (Second Edition). Open University Press. Buckingham, Philadelphia. (Chapter 2 & 3, Page: 12-77)

Reference Books

1. Chaiklin, H. (2011). Attitudes, Behavior and Social Practice. The Journal of Sociology and Social Welfare. Volume 38, Issue 1, Article 3. Available at: : https://scholarworks.wmich.edu/jssw/vol38/iss1/3
2. Fazio, R.H., Roksos-Ewoldsen, D.R. (2014). Acting as We Feel: When and How Attitudes Guide Behavior. [PDF file] Retrieved from https://uk.sagepub.com/sites/default/files/upm binaries/4874_Brock_Ch_3__Acting_as_we_feel.pdf

Course Code: POP 106 Course Title: Family Demography

Credits: 04 **Course Type:** Core

Rationale of the Course: The purpose of this course is to offer students knowledge of central aspects of family demography, such as fertility, family formation, divorce, and cohabitation. This course examines various concepts, theories, issues, and debates about marriage and family. It describes the historical perspectives of marriage and family. It focuses on types of marriage and family, changing marriage and family trends, and ever-changing family functions. It enables students to understand core family theories, the dynamics of mate selection, romantic relationships, divorce, single-parenting, children in broken families, remarriage, working mothers, LGBT (Lesbian, Gay, Bisexual, Transgender) families as part of human life experiences of today's society. This course depicts marriage-family interactions in the context of demography.

Course Learning Outcomes:

CLO 1	**Remember** the definition of essential terms related to family demography, including family structures, fertility, marriage, and various theoretical frameworks.
CLO 2	**Understand** the classical and contemporary theories on marriage and family change and their applications to empirical research.
CLO 3	**Apply** different theoretical frameworks to analyze current family trends and issues, such as low fertility, childlessness, and the impact of migration on family structures, and illustrate the real-world implications of different family structures and policies on individual and societal well-being.
CLO 4	**Analyze** the dynamics of diverse family forms, including same-sex, single-parent, blended, and transnational families, and investigate the relationships between family structures and various outcomes, such as child wellbeing, health, mortality, and economic conditions.
CLO 5	**Evaluate** the effectiveness of population policies and interventions to support different family structures, such as assisted reproductive technologies, surrogacy, and other modern family formation practices.
CLO 6	**Create** research design to investigate specific aspects of family demography, utilizing appropriate methods, data, and ethical considerations, and develop informed policy recommendations based on their understanding and analysis of demographic trends and family-related issues.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1		☑			
CLO 2		☑			
CLO 3		☑			
CLO 4				☑	
CLO 5				☑	
CLO 6			☑		

Course Content

Sl No.	Topic	Hours	Alignment to CLO
1.	**Introduction to the Course Family Demography:** Key concepts and definitions-Defining Families, Purposes of Family-Sexual Gratification and Child Rearing, Sex and Sexuality, Sexuality and Sexual Expression; Love, Dating, and Relationships; Love and Romantic Relationships; Romantic Relationships and Dating; Dating and Mate Selection; Singlehood, Cohabitation, Marriage, Marriage as a Cultural and Social Institutions.	10	CLO 1 CLO 6
2.	**Theoretical Perspectives on Marriage and Family Change:** Classical and contemporary theories on family change, Application of theories to empirical research, Critical evaluation of theoretical frameworks, Conceptual Frameworks for Studying Families, Methods, Data, and Ethics in Family Demography.	10	CLO 2 CLO 3 CLO 6
3.	**Overview of Changing Family Patterns and Its Impact on Population:** Historical perspectives on family patterns and variations in family forms across cultures and societies. Same-sex families, single-parent families, and blended families. Trends and patterns in marriage, separation, divorce, and cohabitation. Divorce and Its Effects. Remarriage, Repartnering. Dynamics of stepfamilies, Trends in nonmarital births and their implications, Policy interventions to support nonmarital families and their impact on individuals and society. The effect of social and economic changes on family structures. Family, Work, and Balancing Work and Family Life. Factors contributing to family diversity.	10	CLO 4 CLO 6
4.	**Low Fertility, Pro-Natalist Policies, and Marriage:** Causes and consequences of low fertility, Pro-natalist policies, and their effectiveness; comparative analysis of fertility trends; trends in voluntary and involuntary childlessness; ethical and social implications of surrogacy; role of assisted reproductive technologies in family formation.	10	CLO 3 CLO 4 CLO 5 CLO 6
5.	**Families, Health, Mortality, and Migration:** Health outcomes associated with different family structures, Mortality rates and family dynamics, family influence on mental and physical health, Impact of migration on family structures, Transnational families and their dynamics, Policies affecting migrant families.	10	CLO 4 CLO 6
6.	**Family Structure Fatherhood, Motherhood and Child Wellbeing:** Impact of family structure on child development and wellbeing, Role of stability and instability in child outcomes, Long-term outcomes of children in unstable family environments, Interventions to support children in diverse family structures, Strategies to promote child wellbeing in various family structures, Variations in fatherhood across different demographics, Impact of race and class on fatherhood, Multiple-partner fertility, and its implications.	10	CLO 3 CLO 4 CLO 6

		Total= 60 Hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

1. Robert R. Bell. (1983). Marriage and Family Interaction.
2. William J. Goode. (1982). The Family
3. Letha & Scanzoni. (1976). Men, Women, and Change: A Sociology of Marriage and Family

Reference Books:

1. DeGenova & Phlip Rice (2009). Intimate Relationship, Marriage and Family.
2. Cox & Carol (2009). Family Living.
3. Mark Hutter (2007). The changing family.

Other Resources (Online Resources or others)

Course Code: POP 107 Course Title: Social Sciences Research Methodology –I

Credits: 04 **Course Type:** Core

Rationale of the Course: This course is an overview of Social Science Research Methodology. It is an introductory-level course that aims to inform students about the basic concepts of research, how to conduct research, and why research is important for life and society. This course introduces students to the fundamental principles and methods of social research. It covers research purposes, knowledge production, and the distinction between common sense and scientific knowledge. The course also delves into the foundations of social science research, the process of selecting and formulating research problems, the relationship between theory and research, types of research, research designs, and basic sampling techniques.

Course Learning Outcomes:

CLO 1	**Remember** the definition of key terms such as research, social research, and scientific knowledge, and list the basic assumptions and aims of science and the characteristics of social sciences.
CLO 2	**Understand** the purposes of social research, including exploration, description, and explanation, as well as the steps of the scientific method and the role of methodology in scientific inquiry.
CLO 3	**Apply** the various criteria to formulate a research problem and differentiate between various types of research by purpose (descriptive, explorative, explanatory) and by nature (quantitative, qualitative, mixed methods).
CLO 4	**Analyze** the differences between commonsense-based knowledge and research-based scientific knowledge.
CLO 5	**Evaluate** the criteria used to formulate a good research problem, the role of literature reviews in research problem formulation, and different research designs and their appropriateness for specific research questions.
CLO 6	**Create** a conceptual framework, including operationalizing variables and formulating hypotheses, and designing a research proposal incorporating suitable research designs and sampling techniques.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1			☑		☑
CLO 2			☑		☑
CLO 3			☑		☑
CLO 4			☑		☑
CLO 5			☑		☑
CLO 6			☑		☑

Course Content:

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction to Social Research:** What is Research? What is Social Research? Purposes of Doing Research: Description, Exploration, and Explanation, Types of Knowledge, Commonsense vs. Research-based Scientific Knowledge, why is Commonsense-Based Knowledge Not Enough?	10	CLO 1 CLO 2 CLO 4
2.	**Foundations of Social Science Research:** Basic Assumptions of Sciences, Aims of Science, Characteristics of Science, Scientific Method and its Steps, Problems of Social Sciences, Characteristics of Social Sciences, and Relationship between Science & Social Science, Role of Methodology in Scientific Inquiry.	6	CLO 1
3.	**Selecting and Formulating Research Problem:** What is a Research Problem? When is a Problem Researchable? Sources of Research Problem. How do you select a Research Problem? Criteria for Formulating the Research Problem: Internal and External Criteria, Guidelines and Considerations for Selecting the Research Problem, Criteria of a Good Research Problem, Common Mistakes in Choosing a Research Problem, Role of Literature Review in Selecting and Formulating Research Problem.	16	CLO 3 CLO 5
4.	**Theory and Research:** Definitions of Concept, Variables, Hypothesis, and Theory and their interrelationship; Measurement of concepts and variables; Conceptualization and Operationalizations of Variables. Deductive and Inductive Theory or Theory Then Research vs. Research Then Theory.	8	CLO 6
5.	**Types of Research:** Types of Research by Purpose- Descriptive, Explorative, Explanatory, Experimental. Types of Research by Data Types- Quantitative, Qualitative, and Mixed-Methods. Basic, applied, evaluation, implementation and operations research; formative and summative evaluation research; the distinction between research and routine monitoring.	4	CLO 3
6.	**Research Designs**: Major Types of Research Designs: Descriptive, Explorative, Explanatory, Experimental. Quantitative & Qualitative Research Designs: Cross-sectional Design, Longitudinal Design(s), Case Study Design, Comparative Design. Experimental and quasi-experimental designs: randomised controlled trials, cluster-randomised and stepped-wedge designs, pre-test/post-test and factorial designs. Observational designs: cohort, case-control and nested case-control. Qualitative research designs: ethnography, phenomenology, grounded theory, narrative inquiry and case study. Internal, external, ecological and statistical conclusion validity and the principal threats to each; confounding, selection bias and information bias.	12	CLO 5
7.	**Basic Ideas of Sampling:** Logic of Sampling. Advantages and Disadvantages of Sampling. Types of Sampling Techniques: Probability and Non-probability Sampling. Types of Probability and	4	CLO 6

	Non-probability Sampling. Sample size determination and statistical power for means and proportions; design effect and effective sample size; sampling weights and non-response adjustment; sampling and non-sampling error; appraising the sampling strategy of a published study.		
8.	**Research Ethics, Integrity and Data Governance:** Historical foundations — the Nuremberg Code, the Declaration of Helsinki and the Belmont Report; the principles of respect for people, beneficence and justice. Informed consent, assent, and consent in low-literacy and low-power settings; voluntariness, incentives and undue inducement; confidentiality, anonymity and de-identification. Research with vulnerable populations, safeguarding, and protocols for participant distress and disclosure of harm. Research integrity: plagiarism, falsification and fabrication; authorship and contributorship; conflict of interest; predatory journals; reproducibility, pre-registration and open science; and the ethical and disclosure requirements governing the use of generative AI in research.		
Total		60 hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				

Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

References:

Adams, Gerald R., and Schvaneveldt, Jay D. Understanding Research. New York: Longman, Inc.
Babbie, Earl R. Survey Research Methods. Belmont, California Wadsworth Publishing Company, Inc.
Frankfort-Nachmias, Chava, and Nachmias, David. Research Methods in the Social Sciences. London:

Reference Books

Other Resources (Online Resources or others)

Course Code: POP 108 Course Title: Basic Mathematics

Credits: 02 **Course Type:** GED

Rationale of the Course: This course will cover fundamental mathematics concepts essential for statistics and demographics applications. These concepts include set theory, Real number systems, combinatorics, relations and functions, graphs of functions, calculus, vectors, and matrices. The primary goal of this course is to equip students with the necessary mathematical and analytical skills and develop their critical thinking abilities.

Course Learning Outcomes:

CLO 1	Remember the fundamental mathematics concepts essential for statistics and demographics applications.
CLO 2	Understand the basics of set theory, number systems, functions, and equations, which are essential to computing fundamental notions in statistics and demographics.
CLO 3	Apply tools from the calculus of infinitesimals, such as differentiation, to solve optimal value problems.
CLO 4	Analyze the system of linear equations to get familiar with statistical modeling.
CLO 5	Evaluate the scopes of using matrix algebra principles essential to solving problems with high dimensions.
CLO 6	Create opportunities to use the understanding and knowledge of relations and functions in real life.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	x	x	x	x	x
CLO 2	x			x	x
CLO 3	x	x	x		
CLO 4	x	x		x	
CLO 5	x			x	x
CLO 6	x	x	x		

Course Content:

Sl. No	Topic	Hours	Alignment to CLO
1.	**Set theory and the real number system:** Different types of set; set operations; Venn diagram; the axioms of set theory; the real number system: operations with integers and rational numbers; order of operations; properties of real number	4	CLO 1, CLO 2

Sl. No	Topic	Hours	Alignment to CLO
2.	**Counting system:** basic counting; counting rules; permutation and combination	4	CLO 1, CLO 2
3.	**Graphs and functions:** Relations and functions; domain and range; ordered pairs and graphs; slope and graphs of the linear equation; equation of lines; exponents and polynomials; exponential functions; polynomial functions and quadratic equation and functions.	4	CLO 1, CLO 2, CLO 3, CLO 4, CLO 5, CLO 6
4.	**Differential Calculus:** Introduction to limits; derivatives, basic derivative properties; derivatives of linear, exponential and logarithmic functions; derivative of products and quotients; the chain rule; implicit differentiation; relative rates; first derivative and graphs; second derivative and graphs; maxima and minima with applications; concavity, functions of several variables.	8	CLO 1, CLO 3, CLO 5
5.	**Integral Calculus:** Indefinite integrals and it properties; integration by successive reduction; Definite integrals and its properties; improper integrals; gamma and beta functions; arc length of plane curves; area enclosed by plane curves.	4	CLO 1, CLO 3, CLO 5
6.	**Vector and matrix:** Vector and vector space; matrix and matrix operations; echelon and canonical form of a matrix; Inversion of a matrix (using row canonical form).	4	CLO 1, CLO 2, CLO 3, CLO 4, CLO 5, CLO 6
7.	**System of linear equations:** Consistent and inconsistent system; solution of a system of linear equations (Gaussian elimination and inversion method); rank of matrix	2	CLO 1, CLO 2, CLO 3, CLO 4, CLO 5, CLO 6
		Total = 30 hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑		☑	☑

Analyse			☑		☑	☑
Evaluate			☑		☑	☑
Create			☑	☑	☑	☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	**Final Exam**				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

Foundations of Mathematics, Custom Edition, Nelson Education Ltd. Canada, ISBN 0176650881.

Reference Books:

Mathematics for Management, 3rd Custom Edition, Pearson Learning Solutions, ISBN: 978-1-323-24391-6

Stewart J, Clegg DK, Watson S. Calculus. Cengage Learning; 2020.

Other Resources (Online Resources or others)

Course Code: POP 109 Course Title: Population, Environment, and Sustainable Development

Credits: 04 **Course Type:** Core

Rationale of the Course: This course presents the complex and multifaceted relationship between population, environment, and sustainable development. The courses will address sustainable development, population dynamics, and environmental issues, emphasizing current social, political, and development issues. This course investigates policies that support sustainability and the reasons behind their typical marginalization or omission from intergovernmental processes focused on sustainable development.

Course Learning Outcomes:

CLO 1	**Remember** and define the major concepts of environment and sustainable development and its historical evolution.
CLO 2	**Understand** the multidisciplinary nature of population and environmental changes and explain their importance and relevance to understanding sustainable development.
CLO 3	**Apply knowledge** to identify the key environmental issues and challenges such as ecology, ecosystem environmental pollution, deforestation, soil erosion, resource degradation
CLO 4	**Analyze** the dynamic relationships between population, development, and related factors, social, and political paradigms that impact the environment.
CLO 5	**Evaluate** the consequences of population growth and its environmental impact, and critique environmental policies and programs to achieve the Sustainable Development Goals.
CLO6	**Create** different models to interlink Population, Environment, and Sustainable Development for better management.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	X				
CLO 2	X	X		X	
CLO 3	X	X		X	
CLO 4	X	X		X	
CLO 5			X	X	X
CLO 6	X			X	X

Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction to Population, Environment, and Sustainable Development:** Concept of environment and its components; History of environmental concern; Different concepts of population, environment, and development; Concept of Social consequences of development and environmental changes; Concept of Sustainable Development; Sustainable development goals	6	CLO 1
2.	**Environment Issues:** Ecology (ecological pyramid, ecological footprint, and ecological succession); Biodiversity; Natural resources; Ecosystem; Renewable energy (biomass, solar, wind, hydro, geothermal); Nuclear energy	6	CLO 2
3.	**Environmental degradation and resource depletion:** Land quality issues: Environmental impacts of land-use; Irrigation efficiency and crop productivity; Land degradation; Agrochemicals and their environmental impacts; Deforestation; Water quality issues: Water scarcity, Hydrological cycle and water resources- surface, ground, desalination; Water pollution; Oceans and international waters; Air Quality issues: Sources and types of air pollutions; Ozone depletion; Energy Resources: Fossil fuels (oil, natural gas and coal)	10	CLO 3
4.	**Population and Challenges to Environmental Sustainability:** Population dynamics and environmental stress: causes and consequences; Environmental crisis and social unrest and Sustainable Development; Population pressure on water, air resource, ecosystem, desertification, and deforestation; energy resources; Population and environmental justice: equity, rights, and ethics	8	CLO 3
5.	**Population, Environment, and Sustainable Development:** Dynamic relation between population environment and sustainable development; Impacts of the population on natural resources and ecosystem; Population, poverty, and environmental degradation (Malthusian perception controversy; social inequalities as a threat multiplier); Population and environmental health issues; Critiques of sustainable development perspectives; Sociological approaches to sustainable development; Population-related challenges and natural resource use and management.	10	CLO 4
6.	**Environmental Management:** Environmental Management System; Public-Private Partnerships for Sustainability; Environmental Impact Assessment; Integrated water resources management; Energy – water – food nexus and management issues; Strategies/technologies for air quality management; Waste Management; Sustainable energy options	8	CLO 4 CLO 5
7.	**National Policies and Programs:** Policy and practice in environmental sustainability and development Principles of environmental policy concepts; Environmental Policies; Environmental conservation act; Environmental laws and regulations; Sustainable Development Goals (SDGs); Conventions and treaties on environment and climate change; Integrating sustainability into development policies and strategies	10	CLO 5 CLO 6
	Total	60 Hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply	☑		☑			☑
Analyse			☑	☑	☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)
The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

1. Rom, W. N. (2011). *Environmental policy and public health: air pollution, global climate change, and wilderness* (Vol. 14). John Wiley & Sons.

2. Agrwal K. and Purohit S., *Environmental Pollution: Causes, Effects and Control*, 2006 Jodhpur: Agrobios India
3. Rana, S. V. S. (2013). Essentials of ecology and environmental science. PHI Learning Pvt. Ltd.

Reference Books

1. Vig, N. J., & Kraft, M. E. (Eds.). (2012). *Environmental Policy: New Directions for the Twenty-First Century 8th Edition*. Sage.
2. Ukaga, O., Maser, C., & Reichenbach, M. (Eds.). (2010). *Sustainable development: Principles, frameworks, and case studies*. CRC Press.
3. Clarke, J. I. (1996). The impact of population changes on the environment: An overview. *Resources and Population: Natural, Institutional and Demographic Dimensions of Development, Oxford: Clarendon Press. Google Scholar*.

Other Resources (Online Resources or others)

Course Code: POP 110 Course Title: Viva-Voce

Credits: 01 **Course Type:** Core

1. Rationale of the Viva-Voce

The Viva Voce Examination at the end of every even semester (2, 4, 6, and 8) serves as an **intermediate milestone** in the undergraduate program. It ensures that students have acquired sufficient foundational knowledge in population, health, and development issues and can **articulate, integrate, and apply** this knowledge in oral form. This assessment develops students' ability to:

- Express and defend ideas clearly in front of an academic panel.
- Demonstrate understanding of the first -year coursework (Semesters 1 & 2).
- Connect classroom learning with practical and policy issues.
- Receive constructive feedback early, guiding their future learning trajectory.

2. Course Learning Outcomes (CLOs)

By the end of the Viva Voce Examination, students will be able to:

1. **Recall and explain** key concepts, theories, and methods learned in the first two semesters. *(Remember, Understand)*
2. **Apply** demographic and public health concepts to simple problem-solving or case scenarios. *(Apply)*
3. **Communicate** knowledge orally in a clear, structured, and confident manner. *(Apply)*
4. **Reflect** on the relevance of early learning to population, health, and sustainable development issues. *(Evaluate)*

3. Evaluation Committee

- The **Viva Voce will be conducted by a 4-member Examination Committee** appointed by the Department.
- **Questions will be drawn from the courses taught during the first year (Semesters 1 & 2).**
- Each examiner may ask questions, and marks will be awarded individually, which will then be averaged.

4. Evaluation Criteria (100 Marks; 1 Credit Equivalent)

Each student will face about **10 minutes of oral questioning** by the examination committee. Students will be assessed on the following criteria:

Sl No.	Component	Description	Marks
1.	Conceptual Understanding	Accuracy in recalling and explaining key concepts, definitions, and theories from Semester 1 and 2 courses.	25%
2.	Application & Problem-Solving	Ability to apply concepts/methods to minor case problems, scenarios, or data excerpts.	25%
3.	Integration & Reflection	Ability to link foundational knowledge to broader population, health, and development issues.	20%
4.	Communication Skills	Clarity, confidence, logical flow, and academic language in oral responses.	20%
5.	Professionalism	Attitude, engagement with examiners, and academic integrity during the exam.	10%

Second Year Third Semester

Course Code: POP 201 Course Title: Fertility and Reproduction

Credits: 04 **Course Type:** Core

Rationale of the Course: This course provides a comprehensive understanding of human fertility and reproduction, covering the biological, medical, and social aspects. It aims to equip students with knowledge about reproductive systems, fertility issues, contraception, and assisted reproductive technologies (ART). This course introduces students to the basic concepts and measures applied in studying human fertility. The course is designed to provide students with theoretical frameworks for studying fertility. The course will focus on the determinants of fertility and the fertility behavior of the population in the context of socioeconomic development, gender relations, poverty, etc. It will examine social policies addressing different fertility situations in the current global fertility situation. This course aims to focus on contemporary trends, patterns, and determinants of fertility in Bangladesh. Issues and fertility decline in Bangladesh and a global context will be a significant focus of the course.

Course Learning Outcomes:

CLO 1	Remember the terms and indicators used to describe and measure fertility in populations.
CLO 2	Understand concepts and terms applied in the study of fertility and reproduction, including fertility as a major determinant of population process and change and fertility behavior, determinants, and fertility differentials in various contexts (political, social, cultural, economic).
CLO 3	Apply theoretical insights in fertility studies to practical scenarios and case studies.
CLO 4	Analyze contemporary global and national trends, patterns, determinants, and issues in fertility and reproduction.
CLO 5	Evaluate the effectiveness of different policies and approaches in managing fertility.
CLO 6	Creating new models or theories in fertility study based on the critical analysis and evaluation of existing data and policies.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	**PLO 1**	**PLO 2**	**PLO 3**	**PLO 4**	**PLO 5**
CLO 1	☑	☑			
CLO 2	☑	☑			
CLO 3		☑			
CLO 4				☑	
CLO 5					☑
CLO 6					☑

Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction to Reproductive Systems:** Overview of male and female reproductive anatomy; Menstrual cycle and its phases; **Hormonal Regulation of Reproduction-**Endocrine glands involved in reproduction, Hormonal control of the menstrual cycle, Role of hormones in pregnancy and lactation; **Contraception-**Types of contraceptive methods (barrier, hormonal, natural, surgical), Mechanisms of action and effectiveness of contraceptives.	10	CLO 1 CLO 2
2.	**Introduction and Measures of Fertility and Reproduction:** Basic concepts of human fertility and reproduction, fecundity and infecundity, fundable and fecundability, and fertility and infertility. Measures of fertility and reproduction. Behavioral and biological factors of fertility, fertility differentials, population process and fertility, fertility and age and sex composition, and fertility determinants.	6	CLO 1 CLO 2
3.	**Frameworks and Theories of Fertility:** Theoretical perspectives in the study of fertility: Kingsley Davis and Judith Blake's Framework of Fertility; John Bongaarts' Framework of Proximate Determinants of Fertility; Economic theories of fertility; Social theories of fertility; Feminist perspective of fertility; Diffusion and ideas; Technology and fertility.	12	CLO 3 CLO 6
4.	**Fertility and Social Policies:** Examine the determinants and implications of high and low fertility; crisis of low fertility. Social policies for addressing high fertility, family planning programs and fertility, and social policies for addressing low fertility and their implications.	10	CLO 5 CLO 6
5.	**Fertility in Bangladesh:** Trends and patterns of fertility in Bangladesh; Fertility differentials in Bangladesh; Contraceptive behavior in Bangladesh; Determinants of fertility in Bangladesh; Fertility transition in Bangladesh; Adolescent fertility in Bangladesh. Policies and programs relating to fertility in Bangladesh.	10	CLO 4
6.	**World Fertility Transition and Contemporary World Fertility**: World fertility scenario; world fertility trends and patterns; world fertility transition.	6	CLO 4
7.	**Fertility Issues and Diagnosis -** Common causes of infertility in men and women, Diagnostic techniques for fertility assessment, Impact of lifestyle and environmental factors on fertility; **Assisted Reproductive Technologies (ART):** Overview of ART techniques (IVF, ICSI, etc.), Success rates and risks associated with ART, Legal issues surrounding fertility treatments and ART, Future trends and advancements in ART	6	CLO 1
	Total	60 Hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

1. John R Weeks, 2014. Population: An Introduction to Concepts and Issues. Cengage Learning, Boston.
2. Richard E. Jones and Kristin H. Lopez. (2014). Human Reproductive Biology. London: Academic Press

3. Christopher J. De Jonge and Christopher L. R. Barratt. (2002). Assisted Reproductive Technology: Accomplishments and New Horizons. Cambridge: Cambridge University Press
4. John Guillebaud and Anne MacGregor. (2013). Contraception: Your Questions Answered. London: Churchill Livingstone.
5. Gary Becker, 1976. *The Economic Approach to Human Behaviour*, Chicago, University of Chicago Press.
6. Kingsley Davis and Blake, 1956. "Social Structure and Fertility: An Analytical Framework*", Economic Development and Cultural Change,* 4 (3), p. 211-235.
7. John Bongaarts, 1978, "A Framework for Analyzing the Proximate Determinants of Fertility", Vol. 4(1), *Population and Development Review,* P. 105-132.
8. John Boingaarts, 1982. The Fertility-Inhibiting Effects of the Intermediate Fertility Variables, *Studies in Family Planning*, 13(6/7): 179-189.
9. Gary S. Backer 1960. An Economic Analysis of Fertility, in Gary S. Becker ed.) *Demographic and Economic Change in Developed Countries,* p. 209-240. Princeton (New Jersey) Princeton University Press, National Bureau of Economic Research.
10. Richard A Easterline 1975. "An Economic Framework for Fertility Analysis", *Studies in Family Planning,* 6:3, March 1973, pp. 54-63.
11. Caldwell John C. and Caldwell Pat, 1987. The Cultural Context of High Fertility in Subsaharan Africa, *Population and Development Review, Vol 8(4), p. 689-727.*
12. John Cleland, 1987. Demand Theories of Fertility Transition: An Iconoclastic View, *Population Studies,* Vol.1(1). P. 5-30.
13. S. Philip Morgan 2003. Is low fertility a twenty-first-century demographic crisis? *Demography,* 49:589-603
14. John Caldwell and Thomas Schindlmayr, 2003. Explanations of the Fertility Crisis in Modern Societies: A Search for Commonalities, *Population Studies,* 57(3): 241-263.
15. Khuda, Be., Haque, M.R. Hasan, M.S., Alam, N., & Barkat, S, 2018, Fertility Preferences in Bangladesh, in S. Gietel-Basten, J. Casterline, & M. Kim Choe (Eds), *Family Demography in Asia: A Comparative Analysis of Fertility Preferences*, (Book Chapter-3), Edward Elgar Publishing: UK.

Reference Books

Other Resources (Online Resources or others)

Course Code: POP 202 Course Title: Population and Gender

Credits: 04 **Course Type:** Core

Rationale of the Course: Population and Gender considers how gender can be applied to realize population-related phenomena. This course links gender studies and population studies. Students will develop critical thinking about population and gender-related issues. They will know how to tackle gender-related socio-cultural norms and beliefs to reduce gender inequalities in national and global contexts. Students will also learn the methodological aspects of feminism. While learning key gender issues, discussion will also occur regarding this field's theoretical and practical contribution.

Course Learning Outcomes:

CLO 1	Remember the definitions of key concepts such as sex and gender, gender roles, gender socialization, patriarchy, and gender discrimination, as well as different feminist theories, including Liberal Feminism, Socialist Feminism, Radical Feminism, and cultural feminism.
CLO 2	Understand the differences between gender inequality and gender equity and the impact of gender norms on reproductive health and family planning.
CLO 3	Apply feminist theories to analyze gender roles and inequalities in various contexts and use case studies to illustrate gender disparities in fertility trends and mortality rates.
CLO 4	Analyze the causes and consequences of gender-based violence and gender discrimination and its impact on fertility, mortality, migration, and population aging and compare the experiences of women in these regards in different cultural settings.
CLO 5	Evaluate the impact of gender-responsive policies on population dynamics and development and critique traditional population theories from a gender perspective.
CLO 6	Create a gender-sensitive approach to population studies integrating theoretical frameworks and practical examples and propose policy recommendations that address women's needs and promote gender equity in the population-related programs.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑				
CLO 2	☑				
CLO 3		☑			
CLO 4		☑			
CLO 5			☑		
CLO 6					☑

Course Content

Sl No.	Topic	Hours	Alignment to CLO
1.	**Introduction:** Sex and Gender, Gender Roles, Gender Socialization, Gender Discrimination, Patriarchy, Gender-based violence, Gender Inequality, Gender Inequality Index, Theoretical explanation of gender inequalities, Gender Equality, Equity, and Gender Stereotyping.	6	CLO 1 CLO 2
2.	**Feminist Theory:** Feminist theories (Liberal Feminism, Socialist Feminism, Radical Feminism, Cultural feminism) and methodologies.	4	CLO 1
3.	**Population Theories and Gender Critique:** Historical Context: The evolution of gender roles in population studies. Theoretical Frameworks: An overview of gender analysis, feminist demography, and major population theories. Critique of Traditional Theories: Gender perspectives and critiques of conventional population theories. Integrating Gender Perspectives: Developing a gender-sensitive approach to population.	8	CLO 5
4.	**Gender and Fertility:** Fertility Preferences and Behaviors: Gender differences in fertility decisions. Reproductive Health: Impact of gender norms on reproductive health and family planning. Cultural Contexts: Case studies on fertility trends and gender in different cultural settings.	6	CLO 3 CLO 4
5.	**Gender and Mortality:** Mortality and Life Expectancy: Gender disparities in mortality rates. Influencing Factors: Social, economic, and health factors affecting gender differences in mortality. Maternal Health: Impact of maternal health and gender-based violence on mortality.	6	CLO 3 CLO 4
6.	**Gender and Migration:** Patterns of Migration: Gendered causes and consequences of migration. Labor Migration: Gendered vulnerabilities in labor migration and human trafficking. Migration Experiences: Case studies on the experiences of migrant women.	6	CLO 3 CLO 4
7.	**Gender and Population Aging:** Population Aging: Gender aspects of an aging population. Gender Roles: The impact of aging on gender roles and relations. Policy Implications: Addressing the needs of aging women through policy.	6	CLO 4
8.	**Gender, Health, and Well-being:** Access to Healthcare: Gendered access to healthcare and health outcomes. Health Behaviors: Gender differences in health behaviors and mental health. Intersectionality: Exploring health disparities through an intersectional lens.	4	CLO 2
9.	**Gender and Development:** Nexus between Gender and Development: Women in Development (WID), Women and Development (WAD), Gender and Development (GAD), Gender, Environment and Development (WED.	6	CLO 5 CLO 6

Sl No.	Topic	Hours	Alignment to CLO
10.	**Population and Gender Policy Approaches:** Population Policies: Analysis of population policies through a gender lens. Family Planning: Gender equity in family planning programs. Policy Impact: Assessing the impact of gender-responsive policies on population dynamics. The Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), International Conference on Population and Development (ICPD), 4th World Conference on Women (Beijing 1995), National Women's Development Policy, The Girl Summit, Sustainable Development Goals.	8	CLO 5 CLO 6
		Total= 60 Hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

Mahtab, Nazmunnessa. (2011). An Introduction to Women and Gender Studies (Selected Texts on Concepts and Issues).

Bhasin, K. (2000). Understanding gender. Kali for women.

Bhasin, K., & Khan, N. S. (2003). Some questions on feminism and its relevance in South Asia. Institute of Women's Studies, St. Scholastica's College.

Basin, K. (1993). What is Patriarchy?

Sarkar, A. (2006). Gender and development. Global Media Publications.

Reference Books

Appelrouth, S., & Edles, L. D. (Eds.). (2010). Sociological theory in the contemporary era: Text and readings. Pine Forge Press.

Basow, S. A. (1992). Gender: Stereotypes and roles. Thomson Brooks/Cole Publishing Co.

Benería, L., Berik, G., & Floro, M. (2015). Gender, development, and globalization: economics as if all people mattered. Routledge.

Butler, J. (2004). Undoing gender. Psychology Press.

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Cain, M., Khanam, S. R., & Nahar, S. (1979). Class, patriarchy, and women's work in Bangladesh. Population and Development Review, 405-438.

Dreze, Jean, and Amartya Sen. India: Development and participation. Oxford University Press, USA, 2002.

Evans, J. (1995). Feminist theory today: An introduction to second-wave feminism. Sage.

Fiske, S. T. (2010). Interpersonal stratification: Status, power, and subordination.

Jenainati, C. (2014). Introducing feminism: A graphic guide. Icon Books Ltd.

John, N. A., Stoebenau, K., Ritter, S., Edmeades, J., Balvin, N., & Unicef. (2017). Gender socialization during adolescence in low-and middle-income countries: Conceptualization, influences and outcomes.

Ramazanoglu, C., & Holland, J. (2002). Feminist methodology: Challenges and choices. Sage.

Sardenberg, C. M. (2008). Liberal vs. Liberating Empowerment: A Latin American Feminist Perspective on Conceptualising Women's Empowerment 1. IDS bulletin, 39(6), 18-27.

Sultana, A. M. (2010). Patriarchy and women's gender ideology: A socio-cultural perspective. Journal of Social Sciences, 6(1), 123-126.

UNDP. (2019).Human Development Report 2019. Beyond income, beyond averages, beyond today: Inequalities in human development in the 21st century. United Nations Development Programme. New York http://hdr.undp.org/en/content/human-development-report-2019"

UNDP. (2020). Tackling Social Norms - A Game Changer for Gender Inequalities: 2020 Human Development Perspectives. United Nations Development Programme. New York

Other Resources (Online Resources or others)

Course Code: POP 203 Course Title: Statistics for Population Sciences I

Credits: 03 **Course Type:** Core

Course Type: Core

Rationale of the Course: Statistics for Population Sciences I is designed to provide an overview of the discipline of Statistics and familiarize students with the basic concepts and issues of Statistics and its applications. Through this course, students will understand the preliminary concepts of statistics and also be able to apply this knowledge to population and social science-related research.

Course Learning Outcomes:

CLO 1	Remember and define the basic concepts related to descriptive statistics, including the interlinkages among the basic statistical methods, variable classification, data summarization with graphical representation, measures of central tendency and dispersion, and shape of the distribution.
CLO 2	Understand the use of descriptive statistical tools and explain their importance in social science research.
CLO 3	Apply and select the appropriate techniques of descriptive statistics to conduct research in their academic and professional life.
CLO 4	Analyze the differences and importance of using descriptive statistical methods considering the nature and types of the variables.
CLO 5	Evaluate the results of descriptive statistics and interpret the results to explain the role of different types of variables in specific research.
CLO 6	Create opportunities to use the understanding and knowledge of descriptive statistics to use the tools of inferential statistics.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	x	x	x	x	x
CLO 2		x		x	
CLO 3		x	x		
CLO 4				x	
CLO 5		x	x		x
CLO 6					x

Course Content:

Sl. No	Topic	Hours	Alignment to CLO
1.	**Introduction:** Definition and importance of studying statistics in social science research; functions of statistics: differences between descriptive and inferential statistics; key issues of using statistics in social science research; inter-linkages among basic statistical concepts.	6	CLO1
2.	**Level of Measurement:** Meaning and measurement of concept; process of measurement; types of the level of measurement; comparison between the levels of measurement; importance of using the levels of measurement in social research.	8	CLO1
3.	**Data Summarization:** The importance of summarizing statistical data; types of data; ways to summarize data; proportion, percentage, and ratio; importance of frequency distribution to summarize data; importance and types of tables; key issues of table construction;	6	CLO1, CLO2, CLO3, CLO4

Sl. No	Topic	Hours	Alignment to CLO
	formatting frequency table to present data and interpretation; different forms of graphical presentation to summarize data; justification of using different types of graphical presentation.		
4.	**Measures of Central Tendency:** Definition and types of measures of central tendency; comparison between the measures of central tendency; importance and use of the measures of central tendency in further statistical analysis; measures of location and its importance.	8	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
5.	**Measures of Dispersion:** Definition and types of measures of dispersion; absolute measures of dispersion; relative measures of dispersion; comparison between the measures of dispersion; importance and use of the measures of dispersion in further statistical analysis.	8	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
6.	**Shape character of a distribution:** Definition and types of moments; central moments; measures of skewness and its importance; measures of kurtosis and its importance.	9	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
		Total = 45 hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 25)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑	☑		☑	
Understand	☑	☑	☑	☑	☑	☑
Apply		☑	☑		☑	☑
Analyse			☑		☑	☑
Evaluate			☑	☑	☑	☑
Create			☑	☑	☑	☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to

appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

Healey, F. J. (2013). The Essentials of Statistics: a Tool for Social Research (3rd ed.). Wadsworth. USA.

Reference Books:

Walsh, A. (1990). Statistics for the Social Sciences, Harper and Row Publishers, New York.

Schmidt, M.J. (2010). Understanding and Using Statistics: Basic Concepts, 4th eds, BVT Publishing, LLC, USA.

Other Resources (Online Resources or others)

Course Code: POP 203 A Course Title: Statistics for Population Sciences (Lab) I

Credits: 01 **Course Type:** Core

Course Type: Core

Rationale of the Course: The Statistics for Population Sciences lab I is designed to equip the students to apply the methods learned in Descriptive Statistics using practical data. In this course, students will be introduced to SPSS used in statistical analysis and develop expertise. After completing the lab, the students will learn how to handle quantitative data, such as creating data entry templates, data entry, cleaning, and analyzing data using descriptive statistical tools.

Course Learning Outcomes:

CLO 1	Remember and define the options available in SPSS, such as defining variables' names, labels, and measures; data cleaning, recoding, sorting, importing, and exporting data; and performing descriptive statistical analysis, including graphical representation.
CLO 2	Understand the structure of data collection tools and match it with the environment of SPSS.
CLO 3	Apply appropriate descriptive statistics techniques, including frequency distribution with graphical representation, measures of central tendency, and dispersion, to understand the shape and nature of the data.
CLO 4	Analyze data using SPSS and interpret the descriptive statistics output obtained from SPSS output for preparing the research report and scientific journal articles.
CLO 5	Evaluate and report the results of descriptive statistics from the analyzed data in SPSS.
CLO 6	Create opportunities to use the understanding and knowledge of using SPSS in future research and further statistical analysis.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	x	x	x	x	x
CLO 2		x		x	
CLO 3		x	x		
CLO 4				x	
CLO 5		x	x		x
CLO 6					x

Course Content:

Sl. No	Topic	Hours	Alignment to CLO
1.	Introduction to SPSS: SPSS Environment: data editor, output viewer, syntax editor, Data view window; Data creation in SPSS; importing data; Variable types in SPSS and Defining variables.	10	CLO1, CLO2, CLO3
2.	Data manipulation and transformation: computing variables in SPSS, recording variables, ranking cases, sorting data, and selecting subsets of the data.	10	CLO1, CLO2, CLO3
3.	Importing data from spreadsheets and other applications to SPSS and exporting data from SPSS to other formats.	2	CLO1, CLO2, CLO3, CLO4

Sl. No	Topic	Hours	Alignment to CLO
4.	Descriptive analyses with SPSS: Summarizing variables using frequencies; Measures of central tendency (e.g., mean, median, and mode); Measures of dispersion and shape characteristics of data.	4	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
5.	Data visualization using SPSS: Bar charts, pie diagram histograms, line diagrams, scatter plots, and boxplots.	4	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
		Total = 30 hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 15)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 10)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks

1. Julie Pallant. 2016. SPSS Survival Manual: A Step-by-Step Guide to Data Analysis Using IBM SPSS. Berkshire, England: Open University Press.

Reference Books:

1. Dewberry, C 2004, Statistical Methods for Organizational Research: Theory and Practice, 1st Eds., Routledge, New York.
2. Joseph F. Healey. 2012. Statistics: A Tool for Social Research. United Kingdom: WADSWORTH CENGAGE Learning
3. Field, A. 2024, Discovering statistics using IBM SPSS statistics. 4th eds, Sage Publications Limited.

Other Resources (Online Resources or others)

1. Haque, M. R., Parr, N., & Muhidin, S. (2019). Parents' healthcare-seeking behavior for their children among the climate-related displaced population of rural Bangladesh. Social Science & Medicine, 226, 9-20.
2. Haque, R., Parr, N., & Muhidin, S. (2020). Climate-related displacement, impoverishment and healthcare accessibility in mainland Bangladesh. Asian Population Studies, 16(2), 220-239.

Course Code: POP 204 Course Title: Social Sciences Research Methodology -II

Credits: 04 **Course Type:** Core

Rationale of the Course: Research methodology is the cornerstone of scientific inquiry, providing the tools and techniques to explore, understand, and contribute to the ever-evolving landscape of social phenomena. Understanding research methodology is essential for students seeking to contribute meaningfully to the social sciences. Whether students aim to address societal issues, inform public policy, or enhance their critical thinking skills, this course will equip students with the tools to conduct rigorous and impactful research in the dynamic field of social sciences.

Course Learning Outcomes:

CLO 1	Remember key concepts in research designs and methods.
CLO 2	Understand the rationale behind choosing specific data collection methods based on research design and the strengths and limitations of different data collection methods in social sciences.
CLO 3	Apply knowledge to formulate questionnaires and topic guides based on the nature of the research question and context.
CLO 4	Analyze quantitative and qualitative data collection techniques for their applicability based on the context.
CLO 5	Evaluate the validity and reliability of data collection methods.
CLO 6	Create qualitative and quantitative data collection methods to explore a specific research question.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05
CLO 1	X		X		
CLO 2	X	X	X	X	
CLO 3	X	X	X		
CLO 4	X	X	X	X	
CLO 5	X		X	X	X
CLO 6	X		X	X	

Course Content:

Sl No	Topic	Hours	Alignment to CLO
1.	**Research Strategy and Data in Research:** Research strategy; Need and Properties of Research Strategies; Data in research; Importance of accuracy in Data Collection; Issues to be Considered for Data Collection; Types of data; Methods of collecting primary data; Sources of secondary data; Explore practical considerations for selecting and implementing data collection tools. Primary versus secondary data; major secondary sources for Bangladesh and internationally, including BBS censuses and surveys, BDHS, MICS, HIES, DHIS2 and other routine and administrative information systems, and international microdata repositories; the strengths and	6	CLO 1 CLO 2 CLO 4

Sl No	Topic	Hours	Alignment to CLO
	limits of secondary analysis; data documentation and metadata; and the total survey error framework as an organising perspective on data quality.		
2.	**Survey Interviewing and the Interview Schedule:** The purpose of the interviews, Determine the differences between qualitative and quantitative interviews and the types of quantitative interviews (structured, semi-structured, and unstructured). Different forms of interview: in-person, telephone, and virtual face-to-face format; Interview contexts; Conducting interviews; Pilot testing interview schedules; Advantages and limitations of using interviews for quantitative data collection. Interviewer effects, social desirability and response bias; standardised versus conversational interviewing; mode effects across face-to-face, telephone, web and self-administered formats; and interviewer recruitment, training, supervision, back-checking and field-level quality control.	8	CLO 2 CLO 3 CLO 4 CLO 5
3.	**Questionnaire Construction:** Definition and importance of questionnaires in research; Types of questionnaires (structured, semi-structured, unstructured); Applications of using questionnaires; Steps in Designing A Questionnaire; Importance of pretesting and pilot testing questionnaires; Methods for pretesting (cognitive interviewing, focus groups, pilot studies); Analyzing pretest results and making revisions. Levels of measurement and question format; attitude scales — Likert, semantic differential and Guttman — and index and scale construction with internal consistency testing; question order, context and priming effects; double-barrelled, leading and loaded questions; recall periods and telescoping; asking sensitive questions and techniques for reducing social desirability bias; translation and back-translation and cross-cultural equivalence; questionnaire length and respondent burden; and preparing the codebook at the design stage rather than after fieldwork.	8	CLO 1 CLO 2 CLO 3 CLO 5 CLO 6
4.	**Digital and Computer-Assisted Data Collection:** Paper-based versus computer-assisted collection and the implications of each for cost, speed and error; CAPI, CATI and CAWI. Designing and testing electronic forms in ODK, KoBoToolbox, SurveyCTO, REDCap or Qualtrics; skip logic, constraints, validation rules and required fields; capture of GPS, image, audio and barcode data; offline collection and synchronisation. Device management, encryption and data security in the field. Real-time monitoring dashboards, high-frequency consistency checks and automated data quality reports. Remote and online data collection: virtual interviews and focus groups, online panels, and their coverage, self-selection and verification problems. Digital trace, social media and administrative data as research material, and the consent, privacy and representativeness questions they raise.		CLO 2 CLO 4 CLO 5 CLO 6
5.	**Structured observation:** Problems with survey research on social behavior; Importance and benefits of observation; The observation schedule; Strategies for observing behavior; Sampling; Issues of reliability and validity; Field simulations as a form of structured observation; Criticisms of structured observation.	8	CLO 2 CLO 5 CLO 6

Sl No	Topic	Hours	Alignment to CLO
6.	**Participant Observation:** Importance and applications of Participant Observation in various fields; Ethical Guidelines; Steps in Designing a Participant Observation Study; Techniques and Strategies for Effective Participant Observation; How to Be an Effective Participant Observer. Negotiating access and working with gatekeepers; overt and covert roles and their ethical implications; balancing immersion against analytic distance; writing fieldnotes — jottings, expanded notes and reflexive memos; positionality and reflexivity in the field; researcher safety; and exit and disengagement from the field.	6	CLO 2 CLO 4 CLO 6
6.	**In-Depth Interviews:** Ethical Guidelines; Logistics of Interviewing; Steps in Designing Interview Guide; How to Be an Effective Interviewer. Developing the interview guide from the research questions; question types and probing techniques; building rapport; interviewing elites, gatekeepers, and vulnerable participants; trauma-informed interviewing and participant distress protocols; managing silence, digression, and sensitive disclosure; recording, transcription, and translation conventions; determining sample size and assessing saturation; and reflexive journaling.	8	CLO 3 CLO 4 CLO 6
7.	**Focus Groups:** Characteristics and uses of focus group discussions; Ethical Guidelines; Conducting a focus group Discussion; How to Be an Effective Moderator; How to Be an Effective Note-taker; Tips for Taking Focus Group Notes; Analysis of Results. Group composition, size, homogeneity and segmentation; recruitment; developing the topic guide; managing dominant and reticent participants; treating group dynamics and interaction as data in their own right; the limits of confidentiality in group settings; online and telephone focus groups; and distinguishing a focus group discussion from a group interview.	8	CLO 2 CLO 3 CLO 6
8.	**Participatory Rural Appraisal and Participatory Methods:** Understand the concept and principles of PRA; Learn about various PRA tools and techniques; Explore the applications and benefits of PRA in social research; Discuss the challenges and ethical considerations of PRA; Specific tools — social and resource mapping, transect walks, seasonal calendars, daily activity charts, Venn diagrams, wealth ranking, problem trees and pairwise ranking; community-based participatory research; photovoice and participatory video; the power dynamics of participation and the risk of extractive or tokenistic practice; and establishing and documenting rigour in participatory work.	8	CLO 1 CLO 2 CLO 4 CLO 6
		Total = 60 Hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	

Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	**Final Exam**				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks

1. Babbie, E. R. (2020). The Practice of Social Research (15th ed.). Cengage Learning.
2. Bryman, Alan. (2012). Social Research Methods (4th Ed). Oxford; New York: Oxford University Press

Reference Books

1. Varkevisser, C. M., Indra Pathmanathan, Brownlee, A., & World Health Organization. (2003). Designing and conducting health system research projects. Kit Publishers.
2. Mack, N., & Woodsong, C. (2005). Qualitative research methods: A Data Collector's field guide. FLI USAID.
3. Babbie, E. (2015). The Basics of Social Research (7th ed.). CENGAGE Learning Custom Publishing.

4. Tolley, E. E., Ulin, P. R., Mack, N., Robinson, E. T., & Succop, S. M. (2016). Qualitative Methods in Public Health: A Field Guide for Applied Research. Wiley
5. Creswell, J. W. (2009). Research design: Qualitative, quantitative, and mixed methods approach (3rd ed.). Sage Publications, Inc.
6. Payne, G., & Payne, J. (2004). Key Concepts in Social Research. SAGE.
7. Ulin, P. R., Robinson, E. T., & Tolley, E. E. (2005). Qualitative methods in public health: a field guide for applied research. Jossey-Bass.

Other Resources (Online Resources or others)

Second Year Fourth Semester

Course Code: POP 205 **Course Title: Morbidity and Mortality**

Credits: 04 **Course Type:** Core

Rationale of the Course: Morbidity and Mortality is one of the key courses of Population Sciences. In this course, students will study the basic concepts of morbidity and mortality with contemporary debate and theories. This course will introduce the students to the trends and differentials of morbidity and mortality. Students will also learn the nature of mortality and morbidity transition, emphasizing long-term mortality decline. They will also learn the global, regional, and national mortality and morbidity patterns, including health promotion.

Course Learning Outcomes:

CLO 1	**Remember** the definitions of morbidity and mortality, and describe their key characteristics and distinctions, along with the various morbidity and mortality data sources.
CLO 2	**Understand** the indicators used to measure a population's health status, including various morbidity and mortality rates, the multidimensional nature of morbidity, and how it interrelates with demography.
CLO 3	**Apply** morbidity-related measures such as incidence and prevalence, case fatality, and mortality-related measures such as CDR, ASDR, CADR, NNMR, PNNMR, IMR, CMR, MMR, and life expectancy to real-world data.
CLO 4	**Analyze** different theories and approaches to understanding morbidity and mortality, including demographic, health, and epidemiological transitions.
CLO 5	**Evaluate** the effectiveness of public health interventions and personal behaviors in reducing morbidity and mortality and assess the impact of social determinants on health outcomes and inequality in morbidity and mortality.
CLO 6	**Create** health promotion strategies and interventions to address emerging global health issues and design a research project using appropriate models to study the spread and control of infectious diseases.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05
CLO 1	☑				
CLO 2	☑				
CLO 3	☑				
CLO 4		☑			
CLO 5				☑	☑
CLO 6			☑		

Course Content:

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction:** Definition and nature of morbidity and mortality, Distinction between morbidity and mortality, Multidimensional nature of morbidity, Types of morbidity and sources of morbidity and mortality data, The Interrelationship between demography and morbidity.	6	CLO 1 CLO 2
2.	**Measures of Morbidity and Mortality:** Indicators to measure the health status of the population; measures of Morbidity: Incidence and prevalence rate, case fatality rate, attack rate. Measures of Mortality: CDR, ASDR, CADR, NNMR, PNNMR, IMR, CMR, MMR, and life expectancy.	8	CLO 2 CLO 3
3.	**Theories and Approaches to Morbidity and Mortality:** Biomedical and socio-medical Approaches of Health and Illness, The Medical, The Functional, The Psychological, The Legal, and The Biophysical Model of Health.	12	CLO 4
4.	**Causes of Death and Classification of Diseases:** WHO categories of causes of death: Communicable diseases, non-communicable diseases, and injury. Basic ideas about the international classification of diseases: History and Development, Environmental Health. Compression of Morbidity. Demographic transition, Health transition, and Epidemiological transition.	8	CLO 4
5.	**Framework, Determinants, and Differentials of Morbidity and Mortality: Macro and microanalytical** models of morbidity, mortality, and health. Causes of long-term mortality decline: medicine and nutrition, 'exposure*resistance*recovery' framework for infectious diseases, the role of public health and personal behavior. Uses and Application of Susceptible (S), Infection (I), Recovery (R) model (SIR Model), Social determinants of health, Differentials infectious diseases, non-communicable diseases, and injury, Inequality in morbidity and mortality, Preston curve, Health production function.	10	CLO 4
6.	**Global Burden of Morbidity and Mortality:** Basics of global burden of diseases (GBD), Global, regional, and national trends of disease burden and mortality, DALYs, QALYs.	8	CLO 5
7.	**Health Promotion:** Foundation of Health Promotion, Assessment for Health Promotion, Interventions for Health Promotion, Application of Health Promotion, Emerging Global Health Issues	8	CLO 5 CLO 6
		Total = 60 Hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	

Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	**Final Exam**				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks

1. Caselli, G., Vallin, J., & Wunsch, G. (2005). *Demography: Analysis and Synthesis, Four Volume Set: A Treatise in Population*. Elsevier.
2. Edelman, C. L., Mandle, C. L., & Kudzma, E. C. (2018). *Health promotion throughout the life span*. 9th Edition. Elsevier Health Sciences.
3. Fries, J et al. (2011). Compression of morbidity 1980–2011: A focused review of paradigms and progress. *Journal of Aging*, pp. 1-10.
4. Gaimard, Maryse. (2014). *Population and Health in Developing Countries*. Demographic Transformation and Socio-Economic Development Vol. 2. Springer.
5. Hoque, M. Nazrul, Beverly Pecotte, Mary A. McGehee. (2017). *Applied Demography and Public Health in the 21st Century*. Applied Demography Series 8. Springer International.
6. Kumar, S., & Preetha, G. (2012). Health promotion: an effective tool for global health. *Indian journal of community medicine: Official publication of Indian Association of Preventive & Social*

Medicine, *37*(1), 5–12. https://doi.org/10.4103/0970-0218.94009
7. Marmot, M. (2005). *Public Health Social determinants of health inequalities*. Lancet, 365, 1099–1104. https://doi.org/10.1016/S0140-6736(05)71146-6
8. Mckeown, Thomas, R.G. Brown and R.G. Record. (1972). *An interpretation of the modern rise of population in Europe*. Population Studies, Vol. 26, no 3 (Nov., 1972), pp. 345-382.
9. Murray, C and L. Chen. (1993). In search of a contemporary theory for understanding mortality change. *Social Science and Medicine* 3(2):143-155.
10. Poston, Dudley L., Jr., and Bouvier, Leon F. (2010*). Population and Society: An Introduction to Demography*. Cambridge University Press.
11. Sloggett A (2015). Measuring fertility. In *Population Analysis for Policy and Programmes*. Paris: International Union for the Scientific Study of Population. Available at http://papp.iussp.org/sessions/papp101_s04/PAPP101_s04_010_010.html. Accessed 2015-03-16.
12. Thomas, Richard, K. (2016). *In Sickness and In Health: Disease and Disability in Contemporary America*. Springer-Verlag New York.
13. Thomas, Richard, K. (2018). *Concepts, Methods and Practical Applications in Applied Demography_ An Introductory Textbook*. Springer International Publishing.
14. Walker, P. J. R. (2012). *Mortality, Morbidity and Health.* 1–46. Retrieved from www.ssc.wisc.edu/~walker/wp/wp-content/uploads/.../E623MortLec.pdf
15. Weeks, John, R. (2007). *Population: An Introduction to Concepts and Issues.* Tenth Edition, Wadsworth Publishing Company, Belmont, California.
16. World Health Organization (WHO). *International Classification of Diseases 09, 10 and 11*.
17. World Health Organization (WHO). Poster, Infographics, Publications on environmental health.
18. Young, T.K. 1998. *Population Health: Concepts and Methods*. New York: Oxford University Press.

Reference Books

Other Resources (Online Resources or others)

Course Code: POP 206 Course Title: Statistics for Population Sciences II

Credits: 03 **Course Type:** Core

Rationale of the Course: To achieve statistical sophistication, descriptive and inferential statistics are two required investigative methodologies for understanding, evaluating, and carrying out research. With a foundational knowledge of the description statistics acquired in the previous semester, students will learn inferential statistics in this course that focuses on drawing reliable conclusions about the characteristics of a population based on a sample. They can apply this knowledge to various population-related issues and research. Students will also be introduced to statistical software, SPSS, to apply the advanced knowledge of statistical analysis. Overall, this course aims to engraft students with the advanced application of statistical knowledge necessary to understand population dynamics and conduct quantitative research.

Course Learning Outcomes:

CLO 1	Remember and define the concepts related to inferential statistics, including probability distributions, sampling and estimation, tests of hypothesis, and correlation and regression.
CLO 2	Understand the importance and use of inferential statistical tools for data-driven decision-making in research.
CLO 3	Apply and select the appropriate techniques of inferential statistics, considering the research objective and research questions, to conduct research in academic and professional life.
CLO 4	Analyze the data, both primary and secondary, in research using the tools of inferential statistics considering the nature and types of the variables.
CLO 5	Evaluate, report, and interpret the results of inferential statistical outputs to explain the role of different types of variables in a specific research problem.
CLO 6	Create opportunities to use the understanding and knowledge of inferential statistics in future advanced research.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	x	x	x	x	x
CLO 2		x	x	x	
CLO 3		x	x		x
CLO 4		x	x		x
CLO 5				x	x
CLO 6			x	x	x

Course Content:

Sl. No	Topic	Hours	Alignment to CLO
1.	**Introduction to probability:** Sample space; definition and types of events; complement of events; definition of probability; additive and multiplication law of probability; independence of events and conditional probability; Bayes' theorem.	6	CLO1, CLO2, CLO3
2.	**Random variable and its distribution:** Random variable and its type; probability distribution and its classification; mathematical expectation; Bernoulli distribution with properties and assumptions; Binomial distribution with properties, assumptions, and applications; Poisson distribution with properties, assumptions, and applications; Normal distribution: properties, assumptions, empirical rules and applications.	8	CLO1, CLO2, CLO3

Sl. No	Topic	Hours	Alignment to CLO
3.	**Sampling and Estimation**: Sampling and sampling distributions; central limit theorem; law of large numbers; statistical estimation and its types; bias and efficiency; unbiased estimate of mean and variance; construction of confidence interval and concept of controlling the interval estimates' width.	7	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
4.	**Test of Hypothesis:** Test of hypothesis and its importance; types of tests; sources and problems in formulating a hypothesis; errors in hypothesis testing; Hypothesis testing procedures with assumptions: uses of Z test, t-test, chi-square test; *Analysis of variance (ANOVA):* Definition and importance; types of analysis; assumptions of ANOVA; differences between t-test and ANOVA; *Non-parametric tests:* Definition and reasons to use non-parametric test; the Wilcoxon rank-sum test; the Wilcoxon signed-rank test-the Kruskal-Wallis test-Friedman's ANOVA, and chi-square test; reporting and interpreting test of hypothesis.	10	CLO1, CLO2, CLO3, CLO4, CLO 5, CLO 6
5.	**Correlation:** Definition; importance and application of using correlation in further statistical analysis; types of correlation; measures of correlation coefficients: Pearson's r; Spearman ρ; point bi-serial (r_{pb}) correlation; definition and scope of partial and semi-partial correlations and multiple correlations; significance tests of correlation; reporting and interpreting results of the correlation.	4	CLO1, CLO2, CLO3, CLO4, CLO5
6.	**Linear Regression:** Definition of regression and regression-straight line with assumptions and properties; importance and application of the model; ordinary least square estimate of regression parameters; goodness of fit of the model; assessing individual predictors; using parameters and using the model; Multiple linear regression: the basics model with assumptions and properties; parameter estimation using ordinary least square method; goodness of fit of the model; assessing the assumptions-case wise diagnostic; reporting and interpreting the results of multiple regression.	6	CLO1, CLO2, CLO3, CLO4, CLO5
7.	**Logistic regression:** Background to logistic regression; importance and applications of logistic regression; assumption of logistic regression; principles of logistic regression: log-likelihood statistic; goodness of fit; Wald statistic; Exp(B); reporting and interpreting results of logistic regression.	4	CLO1, CLO2, CLO3, CLO4, CLO5
		Total = 45 hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar with the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond their control, they will arrange a make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks

1. Joseph F. Healey. 2012. Statistics: A Tool for Social Research. United Kingdom: WADSWORTH CENGAGE Learning

Reference Books:

1. Schmidt Walsh, A. 1990, Statistics for the Social Sciences, 1st eds, Harper and Row, New York, USA.
2. Field, A. 2024, Discovering statistics using IBM SPSS Statistics. 4th eds, Sage Publications Limited.

Other Resources (Online Resources or others)

Course Code: POP 206 A **Course Title: Statistics for Population Sciences (Lab) II**

Credits: 01 **Course Type:** Core

Rationale of the Course: This lab is designed to develop the students' expertise in using inferential statistical techniques to draw reliable conclusions about the characteristics of a population based on a sample. They will be able to apply this knowledge to various population-related issues and research using SPSS, demonstrating their advanced knowledge of statistical analysis.

Course Learning Outcomes:

CLO 1	Remember and define the options available in SPSS for testing hypotheses, measuring correlations, and modeling data in research.
CLO 2	Understand the structure of data collection tools and match them with the environment and options for performing different types of inferential statistical techniques using SPSS.
CLO 3	Apply appropriate techniques of inferential statistics, including different tests for decision-making, measuring association/differences between variables, and modeling data to explain the dependency among variables.
CLO 4	Analyze data using SPSS and interpret the output of inferential statistical methods obtained from SPSS for preparing the research report and scientific journal articles.
CLO 5	Evaluate, report, and interpret the results of SPSS outputs to explain causal relationships in line with the research questions.
CLO 6	Create opportunities to use the understanding and knowledge of using SPSS independently for future research and further statistical analysis.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	x	x	x	x	x
CLO 2		x	x	x	
CLO 3		x	x		x
CLO 4		x	x		x
CLO 5				x	x
CLO 6			x	x	x

Course Content:

Sl. No	Topic	Hours	Alignment to CLO
1.	**Test of hypothesis:** uses of Z test, t-test, chi-square test; *Analysis of variance (ANOVA):* Definition and importance; types of analysis; assumptions of ANOVA; differences between t-test and ANOVA; *Non-parametric tests:* Definition and reasons to use non-parametric test; the Wilcoxon rank-sum test; the Wilcoxon signed-rank test; the Kruskal-Wallis test; Friedman's ANOVA, and chi-square test; reporting and interpreting test of hypothesis	10	CLO1 CLO2 CLO3 CLO4 CLO5
2.	**Correlation:** measures of correlation coefficients: Pearson's r; Spearman ρ; point bi-serial (r_{pb}) correlation; partial and semi-partial correlations and multiple correlations; significance tests of correlation; reporting and interpreting results of the correlation.	8	CLO1 CLO2 CLO3 CLO4 CLO5
3.	**Regression analysis:** Ordinary least square estimate of regression parameters; goodness of fit of the model; assessing individual predictors; using parameters and using the model; Multiple linear	6	CLO1 CLO2 CLO3

Sl. No	Topic	Hours	Alignment to CLO
	regression: the basics model with assumptions and properties; parameter estimation using the ordinary least square method; goodness of fit of the model; assessing the assumptions-case wise diagnostic; reporting and interpreting results of multiple regression.		CLO4 CLO5
4.	**Logistic regression:** assumption of logistic regression; principles of logistic regression: log-likelihood statistic; goodness of fit; Wald statistic; Exp(B); reporting and interpreting results of logistic regression.	6	CLO1 CLO2 CLO3 CLO4 CLO5
		Total = 30 hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 15)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 10)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks

1. Julie Pallant. 2016. SPSS Survival Manual: A Step-by-Step Guide to Data Analysis Using IBM SPSS. Berkshire, England: Open University Press

Reference Books:

1. Dewberry, C 2004, Statistical Methods for Organizational Research: Theory and Practice, 1st Eds., Routledge, New York.
2. Joseph F. Healey. 2012. Statistics: A Tool for Social Research. United Kingdom: WADSWORTH CENGAGE Learning
3. Field, A. 2024, Discovering statistics using IBM SPSS statistics. 4th eds, Sage Publications Limited.

Other Resources (Online Resources or others)

1. Haque, M. R., Parr, N., & Muhidin, S. (2019). Parents' healthcare-seeking behavior for their children among the climate-related displaced population of rural Bangladesh. *Social Science & Medicine*, *226*, 9-20.
2. Haque, R., Parr, N., & Muhidin, S. (2020). Climate-related displacement, impoverishment and healthcare accessibility in mainland Bangladesh. *Asian Population Studies*, *16*(2), 220-239.

Course Code: POP 207 Course Title: Population and Development

Credits: 04 **Course Type:** Core

Rationale of the Course: Population and development are composite concepts by nature, and population issues do not exist in isolation. Thus, any development effort should consider the parameters of the population for sustained economic growth and the welfare of society. In this regard, the link between population and development, particularly social and economic development, has been the subject of intense discussions, and debates are encouraged in this course. Keeping that in view, the main aim of the course is to build the capacity not only to explain the population and development debate but also to articulate the potential positive and negative aspects of demographic processes and their role in development vis-a-vis.

Course Learning Outcomes:

CLO 1	Remember the most significant population and development issues.
CLO 2	Understand and explore the relationship between population and development and understand the framework of population and development.
CLO 3	Apply how population processes (fertility, mortality, migration) and population growth matter for development.
CLO 4	Analyze how development affects the population.
CLO 5	Evaluate population—and development-related policies, goals, strategies, actions, and effects and how this scholarship can improve policies and programs.
CLO 6	Create exemplary evidence on population and development indicators.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	X			X	
CLO 2		X		X	
CLO 3			X	X	
CLO 4				X	
CLO 5				X	
CLO 6			X		X

Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction: Population is a Development Issue:** Concept, theories and measuring development and indices of development; population and development: the core issues in historical perspectives	6	CLO 1 CLO 6

Sl No	Topic	Hours	Alignment to CLO
2.	**Population and Development:** The conceptual framework of population and Development; How population affects Development; How development affects population; The demographic transition/ change affects development	6	CLO 2
3.	**Population and Economic Development:** Population growth and economic Development; Population and age structure and development: youthful population, aging population, labor force participation, and demographic dividend; Human capital aspects of economic development	9	CLO 2 CLO 3
4.	**Fertility, Culture, and Development:** Conceptualizing fertility: background and proximate determinants of fertility; Culture and fertility differentials; Is fertility decline a global diffusion process? Is development the best contraceptive? Can a crisis-led fertility decline occur?	6	CLO 3 CLO 4
5.	**Mortality, Disease, and Development:** Mortality Decline and Development; Mortality and Diseases: Epidemiological Transition.	6	CLO 3
6.	**Migration and Development:** Urbanization, Migration, and Development	6	CLO 3
7.	**Population, Development, and Environment:** Population, Development, and environmental linkage; Sustainable Development: concept–measurement; Population in climate change challenges	6	CLO 3 CLO 4
8.	**Population Policies, Planning, and Development:** World population policies: origin, evolution and impact; ICPD 1994, Beijing 1995, MDGs 2000 and SDGs 2015; Bangladesh population policies and development programs	9	CLO 4 CLO 5
9.	**Population and Development Issues in Bangladesh:** Population and development issues	6	CLO 1 CLO 5
		Total = 60 Hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse			☑		☑	☑

Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	**Final Exam**				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

Gould, W. T. S. (2009). Population and Development. London: Routledge
Dyson, Tim (2010). Population and Development - The Demographic Transition, Zed Books.
Furedi, Frank (1997). Population and Development: A Critical Introduction. New York: St. Martin's Press

Reference Books

1. Todaro, Michael P. and Stephen C. Smith (2012). Introduction to Development Economics: Economic Development, 11th edition
2. Bloom, David E., David Canning, and Jaypee Sevilla. 2003. The Demographic Dividend: a New Perspective on the Economic Consequences of Population Change. Santa Monica, Calif: Rand.
3. May, John F (2012). World Population Policies: Their Origin, Evolution, and Impact. 2012th ed. Springer.
4. Bongaarts, John and Steven Sinding (2011). 'Population Policy in Transition in the Developing World', Science, Vol. 333, P. 574-576
5. Arthur, W. Brian and Geoffrey McNicoll. 1978. An Analytical Survey of Population and Development in Bangladesh, Population and Development Review, Vol. 4, No. 1, pp. 23-80, Population Council

6. Jones, Gavin (ed). 2015. The Impact of Demographic Transition on Socio-economic Development in Bangladesh: Future Prospects and Implications for Public Policy, UNFPA, Bangladesh
7. Islam, Mohammad Mainul and Sayema Haque Bidisha (2013). 'Population and Development Issues in Bangladesh', The Dhaka University Studies, Vol. 68, No.1, June 2011 (Published in July 2013)
8. Mohammad Mainul Islam, Md. Anwer Hossain and Rahul Sanjowal (2022). Bangladesh at Fifty: Changes and Challenges on Population and Development, Journal of Governance Security & Development (JGSD), Volume 3, No. 1, July 2022, DOI: 10.52823/PNIF4859

Other Resources (Online Resources or others)

Course Code: POP 208 Course Title: Migration and Mobility

Credits: 04 **Course Type:** Core

Rationale of the Course: This course will introduce population movements and migration as a major socio-demographic context of population studies and enable conceptualizing the population-migration-development nexus from a multidisciplinary theoretical perspective in the national and international context.

Course Learning Outcomes:

CLO 1	**Remember** and conceptualize population movements and migration; Define and relate critical issues; and consider historical and contemporary trends of population movements and migration.
CLO 2	**Understand** the early and contemporary theoretical approaches to different types of population movements and internal and international migration from multidisciplinary perspectives.
CLO 3	**Apply** the conceptualization of population movements and migration as agents of social transformation in terms of race, gender, culture, state, and nation; related security issues, politics, and climate change.
CLO 4	**Analyze** the dynamics and multidimensional contexts of internal and international migration in Bangladesh.
CLO 5	**Evaluate** potential perspectives and management of diversified patterns of emerging migration trends from national and international perspectives in the 21st century.
CLO 6	**Create** a broader understanding of population movements and migration's role in shaping and determining the nature and trends of other population variables, as well as historical and contemporary socio-economic, cultural, and political trends.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑	☑			
CLO 2	☑	☑			
CLO 3	☑	☑		☑	☑
CLO 4	☑	☑		☑	☑
CLO 5	☑	☑		☑	☑
CLO 6	☑	☑	☑	☑	☑

Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	Conceptualization of population movements and migration; Critical aspects of definitions; National and international data sources; Migration differential; Major causes and trends of international migration	8	CLO 1, CLO 6
2.	Historical trends of population movements and migration, Mercantile Period; Industrial Period; Limited Migration. Post-Industrial Migration, William Petersens' 'A General Typology of Migration'; Stephen Castells' 'Age of Migration'	8	CLO 1, CLO 2
3.	Ernst George Ravenstein's 'Laws of Migration'; Everett S. Lee's 'A Theory of Migration'; Economic approach -The Neoclassic Theory of Migration, The New Economics of Migration, Family Migration and Selectivity of Migration-The Dual labor Market Theory-The World	10	CLO 2, CLO-6

Sl No	Topic	Hours	Alignment to CLO
	Systems Theory; The Sociologic Approach; The Mobility Transition; The Contribution of Political Science; The Systems Approach		
4.	Migration and development debate; Transformation of origin and receiving societies; Ethnic minorities; Race and racism, Gender and migration; Culture, identity, and community; State, nation and citizenship; Policy consideration	8	CLO 3, CLO 6
5	Key dimensions of the migration and security nexus-national and international context; Human smuggling and trafficking; Anti-immigrant movement and politics; Environment, climate change, and migration, Migration, and health	8	CLO 3
6.	Internal Migration in Bangladesh. Scale and determinants; Profile of migrants; Labour markets; Consequences of migration; Migration and poverty; Government policies and instruments; Key policy issues, gaps, drivers of change and recommendations International Migration in Bangladesh. Historical development; Importance to the national economy, livelihoods of poor people; Main flow and determinants, Scale of Migration, nature of migrants, Remittance, Methods of transfer; Key problem areas; Government policy and instruments	10	CLO 4
7.	Future perspectives for global migration and mobility; Improving international cooperation and governance; Responding to irregular immigration; Legal migration and integration; Ethnic diversity, social change, and the nation-state	8	CLO 5, CLO 6
		Total = 60 Hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	☑
Understand	☑	☑	☑		☑	☑
Apply	☑		☑		☑	☑
Analyse	☑		☑		☑	☑
Evaluate	☑		☑		☑	☑
Create	☑		☑		☑	☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar with the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond their control, they will arrange a make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

1. Hania Zlotnik, 2006, "Theories of International Migration" (Chapter 59) in Graziella Caselli (et al.), Demography: Analysis and Synthesis, Vol.2, Elsevier, pp. 293-306.
2. Douglas S. Massey and others, 2002, "Theories of International Migration: A Review and Appraisal" in Frank Trovato (Edited). Population and Society: Essential Readings, New York: Oxford University Press, pp.298-313
3. Everett S. Lee, 1966, "A Theory of Migration" in Demography, Vol.3, No 1, pp.47-57
4. United Nations. 1973. Determinants and Consequences of Population Trends. New York: United Nations
5. Rita Afsar, 2000 Rural-Urban Migration in Bangladesh: causes consequences and challenges, Dhaka: University Press Limited
6. Stephen Castles and Mark J. Miller 2003. The Age of Migration: International Population Movements in the Modern World, New York: The Guilford Press.
7. Weeks, J.R. 2002. Population: An Introduction to Concepts and Issues (8th Edition) Belmont, California: Wadsworth Publishing Company.
8. William Petersen. 1968. 'A General Typology of Migration' in Charles B. Nam (ed)
9. Population and Society: A Textbook of Readings, Boston: Houghton Mifflin Company
10. Gavin Jones; AQM Mahbub, and Izazul Haq. (2016). Urbanization and Migration in Bangladesh. Dhaka: United Nations Population Fund (UNFPA), Bangladesh Country Office
11. Richard Marshall and Shibaab Rahman. (No Date mentioned). Internal Migration in Bangladesh: Character, Drivers and Policy Issues. Dhaka: United Nations Development Programme (UNDP), Bangladesh
12. BBS. 2015. International Migrants from Bangladesh: Socio-economic and Regional Characteristics, Population Monograph: Volume-3
13. Tasneem Siddiqui 2011. Migration and Development: Pro-poor Policy Choices, University Press Limited

Course Code: POP 209 Course Title: Viva-Voce

Credits: 01 **Course Type:** Core

1. Rationale of the Viva-Voce

The Viva-Voce Examination at the end of every even semester (2, 4, 6, and 8) serves as an **intermediate milestone** in the undergraduate program. It ensures that students have acquired sufficient foundational knowledge in population, health, and development issues and can **articulate, integrate, and apply** this knowledge in oral form. This assessment develops students' ability to:

- Express and defend ideas clearly in front of an academic panel.
- Demonstrate understanding of the second -year coursework (Semesters 3 & 4).
- Connect classroom learning with practical and policy issues.
- Receive constructive feedback early, guiding their future learning trajectory.

2. Course Learning Outcomes (CLOs)

By the end of the Viva Voce Examination, students will be able to:

5. **Recall and explain** key concepts, theories, and methods learned in the third and fourth semesters. *(Remember, Understand)*
6. **Apply** demographic and public health concepts to simple problem-solving or case scenarios. *(Apply)*
7. **Communicate** knowledge orally in a clear, structured, and confident manner. *(Apply)*
8. **Reflect** on the relevance of early learning to population, health, and sustainable development issues. *(Evaluate)*

3. Evaluation Committee

- The **Viva Voce will be conducted by a 4-member Examination Committee** appointed by the Department.
- **Questions will be drawn from the courses taught during the second year (Semesters 3 & 4).**
- Each examiner may ask questions, and marks will be awarded individually, which will then be averaged.

4. Evaluation Criteria (100 Marks; 1 Credit Equivalent)

Each student will face about **10 minutes of oral questioning** by the examination committee. Students will be assessed on the following criteria:

Sl No.	Component	Description	Marks
1.	Conceptual Understanding	Accuracy in recalling and explaining key concepts, definitions, and theories from Semester 3 and 4 courses.	25%
2.	Application & Problem-Solving	Ability to apply concepts/methods to minor case problems, scenarios, or data excerpts.	25%
3.	Integration & Reflection	Ability to link foundational knowledge to broader population, health, and development issues.	20%
4.	Communication Skills	Clarity, confidence, logical flow, and academic language in oral responses.	20%
5.	Professionalism	Attitude, engagement with examiners, and academic integrity during the exam.	10%

Third Year Fifth Semester

Course Code: POP 301 Course Title: Techniques of Population Analysis I

Credits: 03 **Course Type:** Core

Rationale of the course: This course takes students from demographic measures to demographic methods. It builds directly on POP 101, which establishes the sources of demographic data and the standard descriptive measures of fertility, mortality, migration and population composition; those are assumed here and are not retaught. What this course adds is technique: the logic of person-years of exposure and the relationship between rates and probabilities; the assessment of age and sex data quality before that data is used; direct and indirect standardization; the construction, interpretation and application of the life table; the measurement of reproductivity and of nuptiality; the estimation of migration from census data; and population estimation and projection. Every technique is taught with a computer-laboratory component in which students compute the measure themselves from Bangladeshi census, SVRS and BDHS data. Model-based and formal-demographic methods — model schedules, indirect estimation and stable population theory — are the subject of the successor course, POP 306.

Course Learning Outcomes:

CLO 1	Define the core concepts, measures and terminology of population analysis, including exposure, rates versus probabilities, period versus cohort measurement, and the components of population change.
CLO 2	Explain the assumptions, data requirements and limitations that underlie each basic demographic technique and state the conditions under which a measure is valid.
CLO 3	Compute the standard measures of mortality, fertility, nuptiality and migration — including a complete and an abridged life table — from real Bangladeshi census, SVRS and BDHS data using spreadsheet or R software.
CLO 4	Compare populations and sub-populations over time and across groups using direct and indirect standardization and interpret the resulting differences in terms of composition and of underlying risk.
CLO 5	Assess the quality of age and sex data using the Whipple, Myers and UN Age–Sex Accuracy indices, judge whether the data will support a given analysis, and apply appropriate smoothing or adjustment.
CLO6	Produce a short, evidence-based analytical report on the demography of a Bangladeshi district or division that combines several of these techniques and states its own data limitations.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑	☑			
CLO 2	☑	☑		☑	
CLO 3		☑	☑		
CLO 4			☑	☑	☑
CLO 5			☑	☑	☑
CLO 6			☑	☑	☑

Summary of Course Content:

Sl. No	Topic	Hours	Alignment to CLO
1.	From measures to methods: rates, ratios, proportions and probabilities; person-years of exposure and the mid-year population as a denominator; period versus cohort measurement and the limitations of period measures; the Lexis diagram.	4	CLO1, CLO2
2.	Evaluating the quality of age and sex data: age heaping and digit preference — the Whipple index, Myers' blended index and the UN Age–Sex Accuracy Index; sex ratios by age and age ratios as diagnostics; smoothing and graduation of age distributions; the demographic balancing equation as a consistency check.	5	CLO1, CLO2, CLO3, CLO5
3.	Standardization: why crude rates mislead; direct and indirect standardization; choice of standard population; age-standardized mortality, fertility and morbidity rates; the Standardized Mortality Ratio (SMR) and Standardized Fertility Ratio (SFR); the comparative mortality index; interpretation and comparison of standardized rates.	5	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
4.	The life table I — construction: the life-table functions; the estimation of nax and nqx; the survivorship function and person-years lived and the relationships among them; the radix; construction of a abridged life table from age-specific death rates.	6	CLO1, CLO2, CLO3, CLO5
5.	The life table II — interpretation and use: life expectancy at birth and at older ages; the life table as a stationary population; constructing and interpreting an abridged life table for Bangladesh from SVRS and census data.	2	CLO1, CLO2, CLO3, CLO4, CLO6
6.	The life table III — Types of life table: multiple-decrement and cause-deleted life tables; increment–decrement (multistate) life tables; Model life tables and relational systems: the United Nations model life table set and the UN extended tables for developing countries; the Coale–Demeny regional families (West, North, East, South) and the basis for choosing among them; Brass general and African/Asian standards; Brass's logit relational system and the alpha–beta parameters; fitting a relational model to defective Bangladeshi data.	6	CLO1, CLO2, CLO3, CLO4, CLO6
7.	Reproductivity and replacement: the gross reproduction rate; the net reproduction rate computed with the life-table survivorship function; replacement-level fertility and its dependence on mortality; mean age at childbearing; the meaning of NRR = 1.	3	CLO1, CLO2, CLO3, CLO4
8.	Measures of nuptiality: proportions ever married by age; general marriage rate; age-specific and order-specific marriage rates; total marriage rate; median age at marriage; Hajnal's singulate mean age at marriage (SMAM); measures of divorce and widowhood; the nuptiality table; the marriage–fertility link in Bangladesh.	4	CLO1, CLO2, CLO3, CLO4
9.	Estimation of migration: in-, out-, net and gross migration rates and migration effectiveness; census-based estimation from place of birth, place of previous residence and duration of residence; the residual and vital-statistics methods; the census survival ratio method; estimation of international migration flows; adequacy of internal and international migration statistics and direct checks.	5	CLO1, CLO2, CLO3, CLO4, CLO5
		Total = 45 hours	

Assessment Pattern

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑	☑		☑	
Understand	☑	☑	☑	☑	☑	☑
Apply		☑	☑		☑	☑
Analyse			☑		☑	☑
Evaluate			☑	☑	☑	☑
Create			☑	☑	☑	☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Reference Books:

1. Preston, Samuel H. Patrick, Heuveline and Michel Guillot. (2001). *Demography: Measuring and Modeling Population Processes.* Blackwell Publishers.
2. Carmichael, Gordon. (2016). *Fundamentals of Demographic Analysis: Concepts, Measures and Methods.* The Springer Series on Demographic Methods and Population Analysis 38.
3. UN Manual VI (1970). *Methods of measuring internal migration.* United Nations Publication, New York.
4. Smith, D. P. (1992). General Data Adjustment. In *Formal Demography* (pp. 23-47). Boston, MA: Springer US.
5. Farhat Yusuf, Jo. M. Martins, David A. Swanson. (2014). *Methods of Demographic Analysis*. Springer Netherlands.
6. Caselli, G., Vallin, J., & Wunsch, G. (2005). *Demography: Analysis and Synthesis, Four Volume Set: A Treatise in Population*. Elsevier.

Course Code: POP 301A **Course Title: Techniques of Population Analysis (Lab) I**

Credits: 01 **Course Type:** Core

Rationale of the Course: This lab course is designed to develop students' practical skills in advanced population analysis through hands-on experience with data handling, statistical methods, and demographic modeling. It aims to enhance students' understanding of the fundamental concepts and techniques used in demographic research, focusing on the application of both direct and indirect estimation methods. The course also emphasizes critical thinking about the assumptions underlying demographic measures and models.

Course Learning Outcomes:

CLO 1	Remember the fundamental tools and techniques used in demographic analysis, demonstrating proficiency in data handling and analysis with statistical software.
CLO 2	Understand and interpret key demographic concepts and methods, applying them to analyze real-world population data and solving practical demographic problems.
CLO 3	Apply demographic models and analytical techniques in a lab setting to process and analyze population data, addressing real-world issues related to fertility and mortality.
CLO 4	Analyze demographic data in a lab environment using various models and techniques, interpreting the results to understand the relationships between key demographic factors.
CLO 5	Evaluate the strengths and limitations of different demographic models and methodologies in a lab setting, considering the quality of data and the context of the analysis.
CLO 6	Create opportunities for further exploration and research in demographic analysis by integrating various analytical techniques and proposing new research questions or directions based on lab findings.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑	☑			
CLO 2	☑	☑		☑	
CLO 3		☑	☑		
CLO 4			☑	☑	☑
CLO 5			☑	☑	☑
CLO 6			☑	☑	☑

Summary of Course Content:

Sl. No	Topic	Hours	Alignment to CLO
1.	Introduction to R; how to handle and analyze data using R; construction of Lexis diagram	6	CLO1, CLO2 CLO3, CLO4, CLO5, CLO6
2.	Evaluating Quality of Demographic Data: General Assessment of age and sex data; Whipple Index, Mayers' Index, UN Age-Sex Accuracy Index.	6	CLO1, CLO2 CLO3, CLO4, CLO5, CLO6

Sl. No	Topic	Hours	Alignment to CLO
3.	Smoothing and graduation of age distributions	2	CLO1, CLO2 CLO3, CLO4, CLO5, CLO6
4.	Standardization: Choice of Standard Population, Direct Standardization, Indirect Standardization, Calculation of Age-Standardized Rates (Mortality, Fertility, Morbidity)	4	CLO2, CLO3, CLO4
5.	Construction of complete life tables and its interpretation; using different data sources; Model life tables.	4	CLO1, CLO2 CLO3, CLO4, CLO5, CLO6
6.	Construction of abridge life table and its interpretation; using data sources; Brass's logit relational system and the alpha–beta parameters; fitting a relational model to defective Bangladeshi data.	2	CLO1, CLO2 CLO3, CLO4, CLO5, CLO6
7.	Estimation of mean age at childbearing; age-specific and order-specific marriage rates; total marriage rate; median age at marriage; Hajnal's singulate mean age at marriage (SMAM)	2	CLO1, CLO2 CLO3, CLO4, CLO5, CLO6
8.	Migration: Measurement of Migration, Census-based direct estimation, Residual method, panel data attrition methods, The Estimation of International Migration Flows Adequacy of International Migration Statistics, tests of data on place of residence at a previous date	4	CLO1, CLO2 CLO3, CLO4, CLO5, CLO6
		Total = 30 hours	

Assessment Pattern

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Lab Attendance (5 Marks)	Lab Report (25 Marks)	Periodical Lab Test (20 Marks)
Remember	☑		☑
Understand	☑	☑	☑
Apply		☑	☑
Analyse		☑	☑
Evaluate		☑	
Create		☑	☑

SEE-Semester End Evaluation (Number of Marks 50; 3 Hours)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Reference Books:

1. Dalgaard, P. (2002). Introductory statistics with R. New York, NY: Springer New York.
2. Preston, Samuel H. Patrick, Heuveline and Michel Guillot. (2001). Demography: Measuring and Modeling Population Processes. Blackwell Publishers.
3. Carmichael, Gordon. (2016). Fundamentals of Demographic Analysis: Concepts, Measures and Methods. The Springer Series on Demographic Methods and Population Analysis 38.
4. Caselli, G., Vallin, J., & Wunsch, G. (2005). Demography: Analysis and Synthesis, Four Volume Set: A Treatise in Population. Elsevier.

Course Code: POP 302 Course Title: Urbanization, Urban Planning, and Development
Credits: 04 **Course Type:** Core

Rationale of the Course: The course introduces various urban environments/settlements and demonstrates how social and geographic inequalities are caused by the interaction of urbanization, globalization, and economic expansion. Using case studies from both the developed and developing worlds, the course will also address how to use the relational comparative urbanism approach and regionally based theoretical perspectives to comprehend the diverse urban landscapes around the world. A complete understanding of cities is necessary from the standpoint of planning, and this is made possible by looking into its history and the different theories, conceptions, and planning techniques that have shaped it. The course will also give students a foundation for critically examining our role in some of the most urgent urban environmental and social concerns of our day and for positively considering potential paths toward change. Finally, the students will be able to comprehend and relate the interaction of urbanization, urban planning, and development from a multidisciplinary standpoint in the national and international context.

Course Learning Outcomes:

CLO 1	**Remember** and define the major concepts of urbanization, urban planning and development
CLO 2	**Understand** how and why different forms of urbanization in developed and developing countries have developed
CLO 3	**Apply** theoretical perspectives to understand the development of urbanization and urban planning
CLO 4	**Analyze** the implications of population distribution, environment and urbanization
CLO 5	**Evaluate** the consequences of population growth on urban planning and development and analytically assess the merits of proposed solutions
CLO 6	**Create** frameworks to understand the relationship between urban growth, planning, and development

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	X			X	
CLO 2	X				
CLO 3	X	X			
CLO 4	X	X			
CLO 5			X	X	X
CLO 6		X	X	X	X

Summary of Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction:** Primary concepts, definitions and related issues, components of urban growth; Urbanism, urbanization and urban issues; causes and consequences of urbanization; Definitions, trends and projections of urbanization; Concept of sustainable development and how it applies to urban areas	6	CLO1
2.	**Regional perspectives on urbanization and development:** Urbanization and development globally; growth and trends of urbanization in the developed and underdeveloped countries; Urbanization patterns in different world regions	6	CLO1 CLO2
3.	**Urbanization Theories:** Max Weber's 'City and rationality'; Ferdinand Tonnies' 'Gemeinschaft and Gesellschaft'; George Simmel's	12	CLO2

Sl No	Topic	Hours	Alignment to CLO
	'Metropolis'; Chicago School's 'Human behaviour in urban environment'; Robert Redfield's 'Folk-urban continuum'; Akin L Mabogunje's 'Urbanization'; Manuel Castells' 'The Urban Question'; David Harvey's 'Built Environment and circulation of capital'		
4.	**Current Issues in Urbanization:** urbanization and health, refugee movement and adjustment, approaches of addressing the issues and challenges of migration and urbanization; Urbanization and development in Asia-Pacific: Urbanism, urbanization and urban issues	8	CLO3
5.	**Trends in Urban Population:** Current trends in urbanization and projections for urban population; Emergence and growth of mega-cities; Differences in current and projected urbanization rates in different regions of the world; Discussion about urban sprawl and smart growth; Factors affecting and driving urban sprawl	8	CLO 4
6.	**Urbanization nexus in Bangladesh:** Nature of urbanization, natural disaster, climate change and migration, urban population growth, over-urbanization and urban primacy, problems of poverty, housing and urban environment	8	CLO5
7.	**Urban Planning and Policies:** Urban Planning in History; Urban planning theory and practice; Planning for the Future of Cities; Planning and Politics; Urban Planning: Visions and Realities; Planning Techniques; Urban development policies, Definition and objectives of planning, concepts and approaches, governing factors –vision, strategy, goal, objectives, scope and limitation in the Bangladesh context.	12	CLO 6
	Total	**60 Hours**	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply	☑		☑		☑	☑
Analyze			☑	☑	☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	**Final Exam**				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Textbooks:

1. Brunn, S., Hays-Mitchell, M. and Zeigler, D. (eds). 2012. *Cities of the World: World Regional Urban Development*, 5th edition, Rowman & Littlefield
2. The Sustainable Urban Development Reader, 3rd Edition, edited by Stephen M. Wheeler and Timothy Beatley. Routledge. 2014.
3. Taking Sustainable Cities Seriously, 2nd Edition, by Kent E. Portney. The MIT Press.2013.

Reference Books

1. Potter, R. 1992 Urbanisation in the Third World. Oxford: Oxford University Press.
2. Wirth, L. 1938. Urbanism as a way of life, *American Journal of Sociology*, 44(1): 1-24.
3. Kleniewski, N. and Thomas, A. 2011. Examining urban issues, in *Cities, Changes and Conflicts*, Wadsworth Cengage Learning, 3-10.
4. Zeigler, D., Hays-Mitchell, M., and Brunn, S. 2012. World Urban Development, in Brunn,
5. AFSER, RITA, 2000 *Rural-Urban Migration in Bangladesh: causes consequences and challenges,* Dhaka: University Press Limited
6. Cohen, Michael, et al, 1996, Preparing for the Urban Future: Global Pressure and Local Forces, Washington DC. Woodrow Wilson Centre.
7. Ed. by DuToit, Brian M., Safa, Helen I., 2011 *Migration and Urbanization Models and Adaptive Strategies*, De Gruyter
8. Gilbert, A and Gugler, J. 1992. Cities, Poverty and Development Urbanisation in the Third World Oxford: Oxford University Press.
9. Harry Gold. 1982. The Sociology of Urban Life, Prentice-Hall, INC., Englewood Cliffs, NJ
10. Islam N. 1998, Human settlements and Urban Development in Bangladesh. Dhaka: University of Dhaka.

11. Richard E. Bilsborrow , *1997 Migration, Urbanization, and Development New Directions and Issues Kluwer Academic Publisher*
12. Morris. A.E.J., 1979, History of Urban Form Before the Industrial Revolution, George Godwin Limited, London.
13. Gallion. A., Eisner. S., 1998 (fifth edition), The Urban Pattern-City Planning and Design CBS Publishers and Distributors, New Delhi, in arrangement with Van Nostrand Reinhold Company, USA.

Course Code: POP 303 Course Title: Mixed Methods Research Design, Data Analysis, and Report Writing

Credits: 04 **Course Type:** Core

Rationale of the Course: Mixed methods research is now the dominant approach to complex social and health problems, yet it is the approach most often used without warrant. This course pursues two aims at the same time. The first is theoretical: to give students a secure command of the philosophical basis of research. A decision about how to study the social world is first a decision about the nature of reality, about what can be known and by whom, and about the purpose research is meant to serve. The course therefore begins with four philosophical worldviews — the positivist, the constructionist, the transformative and the pragmatic — and moves outward to the families of research approaches and strategies of inquiry that follow from each, so that students see method as the consequence of a philosophical position rather than an arbitrary choice. Only then does the course turn to research design, treating quantitative and qualitative designs before mixed methods designs, because a mixed methods design cannot be defended by a student who does not first understand the two designs it combines. The second aim is practical: to have students conduct mixed methods of study. Working in research teams, students identify a researchable problem, synthesize the literature, develop and defend a proposal and its instruments, collect their own quantitative and qualitative data, analyse survey data in SPSS, STATA and R and interview and focus group data in NVivo and ATLAS.ti, integrate the two strands through joint displays and meta-inference, and write and defend a complete research report to recognized reporting standards. The course closes by turning the same critical apparatus outward, teaching students to appraise published quantitative, qualitative and mixed methods research against explicit quality criteria.

Course Learning Outcomes:

CLO 1	Remember and define the foundational vocabulary of research inquiry — ontology, epistemology, axiology, methodology and method; philosophical worldview and paradigm; strategy of inquiry and research design; and the recognised mixed methods design typologies.
CLO 2	Understand the four philosophical worldviews that underpin social research — the positivist, constructionist, transformative and the pragmatic — and explain how the assumptions of each shape the research questions asked, the strategies of inquiry adopted and the standards by which knowledge claims are judged.
CLO 3	Apply the research cycle to their own study by identifying a researchable problem, synthesising the literature, developing a proposal and its instruments, collecting field data, and analysing quantitative data in SPSS, STATA and SAS and qualitative data in NVivo and ATLAS.ti.
CLO 4	Analyze the families of research approaches and strategies of inquiry arising from each worldview, distinguish quantitative from qualitative research designs, and analyze the fit between a declared worldview, a chosen strategy of inquiry, a mixed methods design typology, and the priority, sequence, sampling and points of integration of a study.
CLO 5	Evaluate published quantitative, qualitative and mixed methods research against established quality criteria — reliability, validity and replicability; credibility, transferability, dependability, confirmability and authenticity; and legitimation and inference quality — using structured appraisal instruments including MMAT, STROBE and COREQ/SRQR.
CLO 6	Create a complete mixed methods research study, integrating the quantitative and qualitative strands through joint displays and meta-inference, and produce and orally defend a research report that satisfies recognised reporting standards.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05
CLO 1	X		X		
CLO 2	X	X	X		
CLO 3	X	X	X	X	
CLO 4	X	X	X	X	
CLO 5	X		X	X	X
CLO 6	X	X	X	X	X

Course Content:

Sl No	Topic	Hours	Alignment to CLO
1.	**Foundations of Research Inquiry and the Mixed Methods Approach:** Research as knowledge generation; the three components of a research approach — the philosophical worldview, the strategy of inquiry and the methods — and why the worldview comes first; ontology, epistemology, axiology, methodology and method; what a paradigm or worldview is and how it is declared and defended; grand and middle-range theory; deductive, inductive and abductive logic; the three research approaches and the emergence of mixed methods as a third methodological movement; formation of research teams and selection of thematic areas.	4	CLO 1
2.	**Philosophical Worldviews I — The Positivist and the Constructionist Worldview:** The positivist worldview — a single knowable reality, determinism, reductionism, empirical observation and measurement, theory testing, objectivity and value neutrality; postpositivism and critical realism; implications for hypotheses, instruments, sampling and inference. The constructionist worldview — multiple negotiated realities, the social construction of reality, Verstehen, phenomenology and symbolic interactionism, meaning as the object of inquiry, inductive theory generation and naturalistic inquiry; implications for open-ended questioning, context, researcher–participant proximity and trustworthiness.	6	CLO 1 CLO 2
3.	**Philosophical Worldviews II — The Transformative and the Pragmatic Worldview:** The transformative worldview — research and the change agenda; power, privilege and social justice; feminist standpoint, critical theory and disability inquiry; the collaborative and emancipatory research relationship; voice, positionality and reflexivity. The pragmatic worldview — consequences of action rather than antecedent conditions; problem-centred and pluralistic inquiry; freedom of method; pragmatism and the dialectical stance as warrants for mixing; the paradigm wars and the incompatibility thesis; writing a worldview and positionality statement.	6	CLO 2

Sl No	Topic	Hours	Alignment to CLO
4.	**Research Approaches and Strategies of Inquiry Arising from the Worldviews:** How each worldview gives rise to a family of strategies — experimental, quasi-experimental, survey and longitudinal inquiry from the positivist worldview; ethnography, phenomenology, grounded theory, narrative inquiry and case study from the constructionist; participatory action research, community-based participatory research and feminist and critical inquiry from the transformative; and the mixed methods family from the pragmatic. Matching strategy to research question; strategy of inquiry distinguished from data collection technique; the limits of the worldview–strategy mapping.	4	CLO 2 CLO 4
5.	**Research Designs I — Quantitative and Qualitative Designs:** Nature and steps of quantitative research; concepts, operationalisation, indicators and measures; levels of measurement; reliability, validity and replication; probability sampling error; experimental, quasi-experimental, survey and longitudinal designs; threats to validity; principal critiques. Nature and steps of qualitative research; narrative, phenomenological, grounded theory, ethnographic and case study designs; purposive and theoretical sampling; saturation; trustworthiness and authenticity; principal critiques; structured comparison of the two designs.	4	CLO 1 CLO 4 CLO 5
6.	**Research Designs II — Mixed Methods Research Designs:** Purposes of mixing — triangulation, complementarity, development, initiation and expansion — and inadmissible justifications; design typologies — convergent parallel, explanatory sequential, exploratory sequential, embedded, transformative and multiphase; priority, sequence and notation conventions; points of interface and integration; writing mixed methods research questions; sampling schemes across the strands and sample size logic on both sides; legitimation and inference quality; selecting and diagramming the design for the group study.	4	CLO 4 CLO 5 CLO 6
7.	**Problem Identification, Selection and Proposal Development:** Selecting and formulating a researchable problem — criteria, feasibility, ethical sensitivity and common mistakes; searching and reviewing the literature and building a review matrix; writing the introduction by the funnel approach — context, evidence, gap, consequence, problem statement, purpose and research questions; the literature review and conceptual framework; the methodology chapter — philosophical position, design, study area and population, selection criteria, sample size and sampling for each strand, data collection and analysis plan, trustworthiness and ethics; instrument development and pre-testing; referencing; proposal presentation and defense.	8	CLO 3 CLO 6
8.	**Fieldwork and Data Collection:** Designing for analysis before fieldwork; sampling for meaning alongside representativeness; field preparation — informed consent, privacy and confidentiality, recording protocols, translation arrangements and enumerator training; administering the quantitative instrument; conducting in-depth interviews and focus group discussions; field notes, reflexive notes and decision logs; supervision, spot-checking and field quality	4	CLO 3

Sl No	Topic	Hours	Alignment to CLO
	control; handling refusals and non-response; data security, transfer and storage; maintaining the audit trail.		
9.	**Entering, Processing, Editing and Analysing Quantitative Data:** Codebook development, variable naming and labelling; data entry, import and verification; range, skip-pattern and consistency checks; missing values and multiple imputation; outliers; recoding and transforming variables; scale construction and Cronbach's alpha; reproducible syntax logs. Univariate and bivariate analysis — frequencies, central tendency and dispersion, cross-tabulation and chi-square, correlation, t-tests, ANOVA, confidence intervals and effect size; multivariate analysis — linear and logistic regression, assumptions, diagnostics and model fit; complex survey analysis with weights; analysis in SPSS, STATA and SAS; publication-standard tables and figures.	8	CLO 3
10.	**Transcribing, Processing and Analysing Qualitative Data:** Verbatim and cleaned transcription and transcription conventions; Bangla–English translation and back-translation; anonymisation, file naming and secure storage. Analytic strategies — thematic analysis, framework analysis, grounded theory coding, narrative analysis and qualitative content analysis; inductive and deductive, semantic and latent coding; codebook development, coding consistency, intercoder agreement and memoing. NVivo — project setup, cases and attributes, node hierarchies, coding, queries, matrices and visualisations; ATLAS.ti — quotations, code groups, co-occurrence and networks; from codes to categories to themes; CAQDAS selection, disclosure of any use of large language models, and the limits of software.	6	CLO 3
11.	**Integration, Report Writing and Critical Appraisal:** Integration in practice — joint displays, side-by-side comparison, following-a-thread and the mixed methods matrix; quantitising and qualitising; formulating meta-inferences; handling convergent, complementary and divergent findings; legitimation and inference quality. Writing up — structure of the report and the journal article; reporting quantitative findings in self-explanatory tables; building a qualitative findings chapter that makes an argument; presenting integrated findings; writing limitations; reporting standards — STROBE, SRQR, COREQ, GRAMMS and MMAT; appendices. Critical appraisal of published quantitative, qualitative and mixed methods research; peer review; final report presentation and defence.	6	CLO 5 CLO 6
		Total = 60 Hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse		☑	☑	☑	☑	☑
Evaluate			☑	☑		☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks

1. Creswell, J. W., & Creswell, J. D. (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (5th ed.). Thousand Oaks, CA: SAGE Publications.
2. Creswell, J. W., & Plano Clark, V. L. (2018). Designing and Conducting Mixed Methods Research (3rd ed.). Thousand Oaks, CA: SAGE Publications.

Reference Books

1. Tashakkori, A., & Teddlie, C. (Eds.). (2010). SAGE Handbook of Mixed Methods in Social and Behavioral Research (2nd ed.). Thousand Oaks, CA: SAGE Publications.
2. Teddlie, C., & Tashakkori, A. (2009). Foundations of Mixed Methods Research. Thousand Oaks, CA: SAGE Publications.
3. Bryman, A. (2012). Social Research Methods (4th ed.). Oxford: Oxford University Press.
4. Mertens, D. M. (2019). Research and Evaluation in Education and Psychology: Integrating Diversity with Quantitative, Qualitative, and Mixed Methods (5th ed.). Thousand Oaks, CA: SAGE Publications.

5. Field, A. (2018). Discovering Statistics Using IBM SPSS Statistics (5th ed.). London: SAGE Publications.
6. Bazeley, P., & Jackson, K. (2013). Qualitative Data Analysis with NVivo (2nd ed.). New Delhi: SAGE Publications.
7. Saldaña, J. (2021). The Coding Manual for Qualitative Researchers (4th ed.). London: SAGE Publications.
8. Braun, V., & Clarke, V. (2022). Thematic Analysis: A Practical Guide. London: SAGE Publications.
9. Creswell, J. W., & Poth, C. N. (2018). Qualitative Inquiry and Research Design: Choosing Among Five Approaches (4th ed.). Thousand Oaks, CA: SAGE Publications.

Course Code: POP 304 Course Title: Social and Behavior Change Communication

Credits: 04 **Course Type:** Core

Rationale of the Course: This course covers the components of behavior modification and communication, along with an explanation of their relationship. It provides an overview of how various social and behavioral communication factors can, depending on the situation, result in various specific health outcomes. Additionally, looks into strategic health communication programs to enhance macro and micro health conditions.

Course Learning Outcomes:

CLO 1	**Remember** and define the key concepts of social and behavior change
CLO 2	**Understand** the importance of behavioral and communication issues, which is crucial in bringing desired health outcomes in a specific context
CLO 3	**Apply** knowledge to conceptualize behavior, change theories, and models
CLO 4	**Analyze** important aspects of health communication in a particular context.
CLO 5	**Evaluate** potential and risks of different strategic health communication initiatives.
CLO 6	**Create** different models to understand the strategic health communication plan in specific contexts, including emergencies

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	X				
CLO 2	X				
CLO 3	X				
CLO 4	X		X	X	
CLO 5			X	X	X
CLO 6			X	X	X

Summary of Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction to Behavior Change Communication:** Conception of BCC and Its Components- Health Promotion and its approaches; Transition from Health Education to Social Behavior Change Communication; Process of Behavior Change;	6	CLO 1
2.	**Health Communication:** Concept of Health communication; Population Communication; Evolution of Health communication in multicultural population; Health communication in public health and community development; Determinants of Reproductive Behavior – Concepts of Communication	8	CLO 1
3.	**Health Communication:** Health behavior theories, models and frameworks and Issues	10	CLO 2
4.	**Planning, Implementing and Evaluating Behavior Change Communication and Intervention:** Planning Behavior Change Communication (BCC planning process; Situation and audience analysis; Identifying communication objectives and strategies; Designing and implementing action plan; Evaluating Outcomes); BCC strategy to improve Family Health Outcome, non-communicable diseases, communicable diseases	8	CLO 3
5.	**Behavior Change Communication for Healthy Behavior:** Social Networks, Social Support, and Health-Related Behavior; Social and	8	CLO 4

	Environmental Barriers to Adherence and Healthy Behavior; Importance of effective message for BCC; Training for effective communication in healthcare settings;		
6.	**Behavior Change Communication in Emergencies:** Effective communication steps during public health emergency	8	CLO 5
7.	**BCC Intervention through Communication Policy and Public Advocacy:** Role of advocacy in population programs and use of advocacy tools in influencing the public policy process	8	CLO 6
	Total	60 Hours	

Assessment Pattern:
CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply	☑		☑			☑
Analyze			☑	☑	☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline

for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Textbooks:

1. Schiavo, R. (2013). *Health communication: From theory to practice* (Vol. 217). John Wiley & Sons.
2. Clelland, John, Janes F. Phillips, Sajeda Amin and G.M. Kamal, 1994. The Determinants of Reproductive Change in Bangladesh: Success in a Challenging Environment. Washington D.C.: The World Bank.
3. US Department of Health and Human Services. (2018). *Theory at a glance: A guide for health promotion practice*. Lulu. com.

Reference Books

1. Fawcet, Hanes (ed.). (1973). Psychological Perspectives on Population. New York. Basic Books.
2. Health Behavior Change: Theories, Methods and Interventions. Andrew Preswitch, Jared Kenworthy, Mark Conner
3. Population Programs in Bangladesh: Problems, Prospects and Policy Issues. Dr. Atiqur Rahman Khan, Ms. Mufaweza Khan
4. Bertrand, J.T. and D.L. Kincaid. 1996. Evaluating Information-Education-Communication (IEC) Programs for Family Planning and Reproductive Health. WG-IEC-03. University of North Carolina: Carolina Population Center. Available online at http:/www.cpc.unc.edu/measure.
5. Parrott, R. (2009). *Talking about health: Why communication matters* (Vol. 7). John Wiley & Sons.
6. Designing a Health Communication Strategy: A Resource for Health Professionals
7. UNICEF (2006). Behavior Change Communication in Emergencies: A Toolkit
8. World Health Organization. (2007). *Effective media communication during public health emergencies: A WHO handbook*. World Health Organization.

Third Year Sixth Semester

Course Code: POP 305 Course Title: Population Ageing

Credits: 04 **Course Type:** Core

Rationale of the Course: Population ageing is an increasingly important demographic phenomenon with significant implications for individuals, families, communities, and national development. This course provides students with a multidisciplinary understanding of the demographic drivers and biological, psychological, social, economic, and policy dimensions of ageing. It examines global trends while giving particular attention to the emerging challenges and opportunities associated with population ageing in Bangladesh. The course equips students to critically understand the needs, rights, well-being, and social inclusion of older people and to assess appropriate policies and programmes for an ageing society.

Course Learning Outcomes:

CLO 1	**Remember** key concepts, demographic drivers, and major global and Bangladesh trends in population ageing.
CLO 2	**Understand** the biological, psychological, social, and life-course perspectives of ageing.
CLO 3	**Apply** theories of ageing to explain living arrangements, social interactions, social support, and person–environment relationships in later life.
CLO 4	**Analyze** the multidimensional consequences of population ageing and the factors shaping older people's health, adaptation, and well-being.
CLO 5	**Evaluate** policies, programmes, legal frameworks, and social interventions addressing population ageing in global and Bangladesh contexts.
CLO 6	**Create** an evidence-informed framework or intervention to address a specific challenge associated with population ageing.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	x			x	
CLO 2	x				
CLO 3	x	x			
CLO 4	x	x			
CLO 5			x	x	x
CLO 6			x	x	x

Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction:** Development of Ageing Studies and Social Gerontology -Methodological Issues- Demographic drivers of population ageing - Global and Bangladesh situation	8	CLO 1
2.	**Biological Aging:** Physiological Changes - Social Consequences of Sensory Changes - Major Biological Theories of Aging.	8	CLO 2
3.	**Social Theories of Aging:** Role Theory - Activity Theory - Disengagement Theory - Continuity Theory - The Elderly as a Subculture - Age Stratification Theory- Interaction Perspective - Exchange Theory Perspective - Political Economy of Aging.	10	CLO 2

Sl No	Topic	Hours	Alignment to CLO
4.	**Life Course Perspectives:** Stages on Life's Way - Historical Ideas of the Life Course- Life Course in the Modern World - Aging in Post-industrial Society.	8	CLO 3
5	**Living Arrangement and Social Interactions:** Person-Environment Theories of Aging-Urban-rural Differences-Neighborhood Impacts-Housing Pattern Impacts-Institutional Living-Environmental Quality	8	CLO 3 CLO 4
6.	**Psychological Changes, Mental Disorder and Adaptation in Old Age**: Personality Development in Adulthood- Self Concept and Self Esteem-Stress, Coping and Adaptation-Epidemiology of Mental Disorder	8	CLO 2 CLO 4
7.	**Aging and Policy Intervention:** Policies and Programs - Development of Aging Policies - UN Resolutions - Housing - Health Care -Social Services -Bangladesh Perspectives.	10	CLO 5 CLO 6
Total		**60 Hours**	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑	☑	☑	☑	☑
Understand	☑		☑	☑	☑	☑
Apply	☑		☑	☑	☑	☑
Analyse	☑		☑	☑	☑	☑
Evaluate	☑		☑	☑	☑	☑
Create	☑		☑	☑	☑	☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this

matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Textbooks:

1. Hooyman, Nancy R. and Kiyak, H. A. 2014. *Social Gerontology: A Multidisciplinary Perspective* (9th Edition), Pearson Education Limited.
2. Thorson, J. A. 2000. *Aging in a Changing Society,* Taylor and Francis Group
3. Bond, J., Coleman, P. and Peace, S. (Ed.) 1993. *Ageing in Society: An Introduction to Social Gerontology,* London: SAGE Publications.
4. Moody, H. R. 1994. *Aging: Concepts and Controversies,* California: Pine Forge Press

Reference Books:

1. Kabir, M. 2002. *Demographic and Economic Consequences of Aging in Bangladesh, Paper* 3, Dhaka: CPD.
2. Abedin, S., 1999. *Social and Health Status of the Aged in Bangladesh,* Paper 4, Dhaka: CPD
3. CPD, 2000. *Ageing in Bangladesh: Issues and Challenges,* Report No. 23, Dhaka: CPD.
4. Kabir, H. 1994. *Local Level **Policy** Development to Deal with the Consequences of Population Ageing in Bangladesh*, UN.
5. HelpAge International. **2000**. *Uncertainty Rules Our Lives: The Situation of Older People in Bangladesh,* HelpAge International.
6. UN. 2003. *Political Declaration and Madrid International Plan of Action on Ageing,* Second World Assembly on Ageing, Madrid 2002, New York: UN.
7. M. Kabir (Ed.), 2003. *The Elderly: Contemporary Issues,* Dhaka: Bangladesh Association of Gerontology.
8. Islam, A K M S. 2001. *Social Aspects of Ageing in Bangladesh: A Case Study of Rajshahi City*, Paper 15. Dhaka: CPD.
9. Kinsella, K. and Velkoff, V. A. 2008. *An Aging World: 2008,* Washington, DC: U. S. Census Bureau.

Course Code: POP 306 Course Title: Techniques of Population Analysis II

Credits: 03 **Course Type:** Core

Rationale of the Course: This course develops the model-based and indirect methods that demographers use when data are incomplete, defective or unavailable — the normal condition in Bangladesh and in most of the developing world. Building on the descriptive measures established in POP 301, it treats advanced life-table analysis, model life tables and parametric mortality laws, model fertility schedules, the indirect estimation of child and adult mortality and of fertility, methods for assessing the completeness of death registration, the proximate determinants of fertility, stable population theory, cohort-component and probabilistic population projection, and models of migration. Throughout, the emphasis is on the assumptions that lie behind each estimate: students are expected to state what a method assumes, to test whether those assumptions hold in the data at hand, and to report the resulting estimate with an honest account of its uncertainty. Each block of the course is paired with a computer-laboratory session applying the method to Bangladeshi census, SVRS, and BDHS data.

Course Learning Outcomes:

CLO 1	Define the concepts and terminology of model-based and indirect demographic estimation, including the direct/indirect distinction, relational models, stable population theory and the logic of projection.
CLO 2	Explain the assumptions, data requirements and failure modes of each advanced technique, and identify the diagnostic evidence that would indicate an assumption has been violated.
CLO 3	Apply indirect estimation techniques — Brass child survivorship, the P/F ratio method, death distribution methods, model and relational life tables and cohort-component projection — to Bangladeshi census, SVRS and BDHS data using MORTPAK, Spectrum/DemProj and R.
CLO 4	Analyse the interaction of fertility, mortality, migration and age structure using stable population theory, decomposition methods and the proximate determinants framework, and interpret the results for population growth and health.
CLO 5	Evaluate competing estimates of the same demographic quantity, justify the choice of one method over another on the basis of data quality and context, and quantify and report the uncertainty attached to an estimate.
CLO 6	Produce an original estimation exercise — a set of national or subnational estimates or projections for Bangladesh — that documents its methods, defends its assumptions and compares its results with published UN or BBS figures.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑	☑			
CLO 2	☑	☑		☑	
CLO 3		☑	☑		
CLO 4			☑	☑	☑
CLO 5			☑	☑	☑
CLO 6			☑	☑	☑

Summary of Course Content

Sl. No	Topic	Hours	Alignment to CLO
1.	The framework for demographic estimation: direct versus indirect estimation; why indirect methods are needed and what they cost in assumptions; the diagnostic evidence of defective data that motivates them; the demographic balancing equation as an accounting identity; the standard toolkit (UN Manual X; Moultrie et al., Tools for Demographic Estimation) and the software used in this course (SPSS/R).	3	CLO1, CLO2, CLO5
2.	Advanced life-table analysis: the force of mortality and the continuous formulation of the life table; Sullivan's method, healthy life expectancy and disability-free life expectancy; decomposition of differences in life expectancy by age and cause (Arriaga, Pollard).	4	CLO1, CLO2, CLO3, CLO4, CLO5
3.	Parametric mortality models: Gompertz's law; the Gompertz–Makeham law; the Siler model; the Heligman–Pollard eight-parameter model; the deceleration of mortality at the oldest ages (Kannisto); parameter estimation, goodness of fit and the interpretation of the fitted parameters.	4	CLO1, CLO2, CLO3, CLO5
4.	Indirect estimation of mortality: estimation of child mortality from children ever born and children surviving — the Brass method and the Trussell and Palloni–Heligman refinements; estimation of adult mortality from orphanhood and from widowhood; the sisterhood method for maternal mortality; estimation of mortality and fertility from full and truncated maternity histories.	5	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
5.	Assessing the completeness of death registration — death distribution methods: the Brass Growth Balance method; the Generalized Growth Balance method; Preston–Coale synthetic extinct generations; the Bennett–Horiuchi method; combining methods and diagnosing age misreporting and differential coverage. Application to the Bangladesh SVRS.	3	CLO1, CLO2, CLO3, CLO4, CLO5
6.	Advanced fertility measurement: cohort versus period fertility analysis and tempo effects; parity progression ratios; completed family size; birth order statistics; the analysis of birth intervals; children ever born and the own-children method.	5	CLO1, CLO2, CLO3, CLO4
7.	Model fertility schedules and relational fertility models: the UN model fertility schedule; the Brass polynomial; Romaniuk's three-parameter model; the Hadwiger model; the Coale–Trussell M–m model of marital fertility control; Brass's relational Gompertz model of fertility; Bogue's regression techniques; criteria for choosing and fitting a schedule.	4	CLO1, CLO2, CLO3, CLO5
8.	Indirect estimation of fertility: estimation from data on children ever born; the Brass P/F ratio method and the Trussell and Arriaga refinements; the relational Gompertz model applied to P/F; the own-children method; reverse survival; reconciling indirect estimates with survey-based direct estimates.	4	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6

Sl. No	Topic	Hours	Alignment to CLO
9.	Proximate determinants and demographic decomposition: Bongaarts' aggregate fertility model and its indices (Cm, Cc, Ca, Ci) and Stover's revision; Coale's indices of overall, marital, non-marital fertility and of proportion married (If, Ig, Ih, Im); Kitagawa's decomposition of a difference between two rates and Das Gupta's generalization to several factors.	5	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
10.	Stable population theory and population dynamics: the stationary and the stable population; Lotka's integral equation and the intrinsic rate of natural increase; the stable age distribution and the intrinsic birth and death rates; the mean length of a generation; quasi-stable populations and their use in estimation; population momentum and Keyfitz's scenarios; the momentum implied by Bangladesh's current age structure.	4	CLO1, CLO2, CLO3, CLO4, CLO5
11.	Migration models and the indirect estimation of migration: Rogers–Castro model migration schedules and their parameters; gravity and spatial-interaction models of migration flows; multistate and transition models; indirect estimation of net migration by the census survival ratio method, the national growth rate method, intercensal survival and place-of-birth methods; estimating internal migration in Bangladesh from census data.	4	CLO1, CLO2, CLO3, CLO4, CLO5
		Total = 45 hours	

Assessment Pattern

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Taxonomy	Class Attendance	Class Participation		Term Paper		Tests	
		Presentation	Quiz	Lab	Assignment	Mid-Term	Final
Remember	X	X	X		X	X	X
Understand	X	X	X		X	X	X
Apply	X	X			X		
Analyze	X	X			X	X	X
Evaluate	X	X			X	X	X
Create	X	X			X	X	X

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Taxonomy	Final				
Remember	X				
Understand	X				
Apply					
Analyze	X				
Evaluate	X				
Create	X				

Course Policies and Procedures (including Makeup Class)

The course requires 75% class attendance to appear in the semester final examination. A student whose attendance is between 60% and 74% may appear in the final examination on payment of a fine of Taka 1,000.00. A student whose attendance is below 60% will be treated as non-collegiate and will not be allowed to sit the semester final examination. The course meets for three contact hours per week over fifteen teaching weeks (45 hours in total), normally as two theory classes and one computer-laboratory session; this replaces the previous statement of "two classes per week for 2 hours per class", which implied 60 hours and contradicted the 45-hour content table. That sentence appears to have been carried over from the POP 101 outline, where 4 credits and 60 contact hours make it correct. Students may consult the course teacher during office hours by prior appointment. The academic calendar giving the class and examination schedule, and the deadlines for assignments and term papers, will be issued at the beginning of the semester. Late submission is permitted but will be penalised. Plagiarism and the adoption of unfair means in any component of assessment will be dealt with under the University's disciplinary regulations.

Reference Books:

1. Preston, Samuel H. Patrick, Heuveline and Michel Guillot. (2001). *Demography: Measuring and Modeling Population Processes.* Blackwell Publishers.
2. Carmichael, Gordon. (2016). *Fundamentals of Demographic Analysis: Concepts, Measures and Methods.* The Springer Series on Demographic Methods and Population Analysis 38.
3. Caselli, G., Vallin, J., & Wunsch, G. (2005). *Demography: Analysis and Synthesis, Four Volume Set: A Treatise in Population*. Elsevier.
4. Farhat Yusuf, Jo. M. Martins, David A. Swanson. (2014). *Methods of Demographic Analysis*. Springer Netherlands.
5. United Nations (1983). Manual X: Indirect Techniques for Demographic Estimation. Population Studies No. 81, ST/ESA/SER.A/81. Department of International Economic and Social Affairs, New York. [Replaces the 1967 manual, which it supersedes]
6. Moultrie, T. A., Dorrington, R. E., Hill, A. G., Hill, K., Timæus, I. M., & Zaba, B. (Eds.) (2013). Tools for Demographic Estimation. International Union for the Scientific Study of Population, Paris. Freely available at demographicestimation.iussp.org. [Principal working text for the indirect estimation components of this course]
7. Coale, A. J., & Demeny, P., with Vaughan, B. (1983). Regional Model Life Tables and Stable Populations (2nd ed.). Academic Press.
8. Brass, W. (1975). Methods for Estimating Fertility and Mortality from Limited and Defective Data. Laboratories for Population Statistics, University of North Carolina, Chapel Hill.
9. Keyfitz, N., & Caswell, H. (2005). Applied Mathematical Demography (3rd ed.). Springer.
10. Wachter, K. W. (2014). Essential Demographic Methods. Harvard University Press.
11. Rogers, A. (1995). Multiregional Demography: Principles, Methods and Extensions. John Wiley & Sons.
12. Siegel, J. S., & Swanson, D. A. (Eds.) (2004). The Methods and Materials of Demography (2nd ed.). Elsevier Academic Press.
13. Bongaarts, J. (1978). A framework for analyzing the proximate determinants of fertility. Population and Development Review, 4(1), 105–132.
14. Bongaarts, J. (2015). Modeling the fertility impact of the proximate determinants: Time for a tune-up. Demographic Research, 33, 535–560.
15. Stover, J. (1998). Revising the proximate determinants of fertility framework: What have we learned in the past 20 years? Studies in Family Planning, 29(3), 255–267.
16. Preston, S. H., & Coale, A. J. (1982). Age structure, growth, attrition and accession: A new synthesis. Population Index, 48(2), 217–259.
17. Bennett, N. G., & Horiuchi, S. (1981). Estimating the completeness of death registration in a closed population. Population Index, 47(2), 207–221.
18. Hill, K. (1987). Estimating census and death registration completeness. Asian and Pacific Population Forum, 1(3), 8–13, 23–24.

19. Rogers, A., & Castro, L. J. (1981). Model Migration Schedules. Research Report RR-81-30, International Institute for Applied Systems Analysis, Laxenburg.
20. Lee, R. D., & Carter, L. R. (1992). Modeling and forecasting U.S. mortality. Journal of the American Statistical Association, 87(419), 659–671.
21. Sullivan, D. F. (1971). A single index of mortality and morbidity. HSMHA Health Reports, 86(4), 347–354.
22. Arriaga, E. E. (1984). Measuring and explaining the change in life expectancies. Demography, 21(1), 83–96.
23. Kitagawa, E. M. (1955). Components of a difference between two rates. Journal of the American Statistical Association, 50(272), 1168–1194.
24. Das Gupta, P. (1993). Standardization and Decomposition of Rates: A User's Manual. Current Population Reports P23-186, US Bureau of the Census, Washington, DC.
25. United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects, latest revision: Methodology of the United Nations Population Estimates and Projections. New York.
26. Bangladesh Bureau of Statistics (2023). Population and Housing Census 2022: National Report. BBS, Dhaka.
27. Bangladesh Bureau of Statistics. Report on Bangladesh Sample Vital Statistics (SVRS), most recent available year. BBS, Dhaka.
28. National Institute of Population Research and Training (NIPORT) & ICF. Bangladesh Demographic and Health Survey, most recent round. NIPORT, Dhaka, and ICF, Rockville, Maryland.

Course Code: POP 306A **Course Title: Techniques of Population Analysis (Lab) II**

Credits: 01 **Course Type:** Core

Rationale of the Course: This lab course is designed to develop students' practical skills in advanced population analysis through hands-on experience with data handling, statistical methods, and demographic modeling. It aims to enhance students' understanding of the fundamental concepts and techniques used in demographic research, focusing on the application of both direct and indirect estimation methods. The course also emphasizes critical thinking about the assumptions underlying demographic measures and models.

Course Learning Outcomes:

CLO 1	Remember the fundamental tools and techniques used in demographic analysis, demonstrating proficiency in data handling and analysis with statistical software.
CLO 2	Understand and interpret key demographic concepts and methods, applying them to analyze real-world population data and solving practical demographic problems.
CLO 3	Apply demographic models and analytical techniques in a lab setting to process and analyze population data, addressing real-world issues related to fertility and mortality.
CLO 4	Analyze complex demographic data in a lab environment using various models and techniques, interpreting the results to understand the relationships between key demographic factors.
CLO 5	Evaluate the strengths and limitations of different demographic models and methodologies in a lab setting, considering the quality of data and the context of the analysis.
CLO 6	Create opportunities for further exploration and research in demographic analysis by integrating various analytical techniques and proposing new research questions or directions based on lab findings.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑	☑			
CLO 2	☑	☑		☑	
CLO 3		☑	☑		
CLO 4			☑	☑	☑
CLO 5			☑	☑	☑
CLO 6			☑	☑	☑

Summary of Course Content:

Sl. No	Topic	Hours	Alignment to CLO
1.	Sullivan's method, healthy life expectancy and disability-free life expectancy; decomposition of differences in life expectancy by age and cause	6	CLO2, CLO3, CLO4, CLO5, CLO6
2.	Application of mortality models	5	CLO2, CLO3, CLO4, CLO5, CLO6
3	Parity progression ratios; completed family size; birth order statistics; the analysis of birth intervals; children ever born	4	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6

4.	Application of fertility models and indirect estimation of fertility	6	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
5.	Kitagawa's decomposition of the difference between two rates and Das Gupta's generalization to several factors	4	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
6.	Migration models and the indirect estimation of migration: Rogers–Castro model migration schedules and their parameters; gravity and spatial-interaction models of migration flows; multistate and transition models	5	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
		Total = 30 hours	

Assessment Pattern

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Lab Attendance (5 Marks)	Lab Report (25 Marks)	Periodical Lab Test (20 Marks)
Remember	☑		☑
Understand	☑	☑	☑
Apply		☑	☑
Analyse		☑	☑
Evaluate		☑	
Create		☑	☑

SEE-Semester End Evaluation (Number of Marks 50; 3 Hours)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar with the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Reference Books:

1. Dalgaard, P. (2002). *Introductory statistics with R*. New York, NY: Springer New York.
2. Hyndman, R., Booth, H., Tickle, L., Maindonald, J., Wood, S., Team, R. C., & Hyndman, M. R. (2023, February). *Package 'demography'*.
3. Preston, Samuel H. Patrick, Heuveline and Michel Guillot. (2001). *Demography: Measuring and Modeling Population Processes.* Blackwell Publishers.
4. Carmichael, Gordon. (2016). *Fundamentals of Demographic Analysis: Concepts, Measures and Methods.* The Springer Series on Demographic Methods and Population Analysis 38.
5. Caselli, G., Vallin, J., & Wunsch, G. (2005). *Demography: Analysis and Synthesis, Four Volume Set: A Treatise in Population*. Elsevier.
6. Farhat Yusuf, Jo. M. Martins, David A. Swanson. (2014). *Methods of Demographic Analysis*. Springer Netherlands.
7. United Nations. (1967). *Methods of Estimating Basic Demographic Measures from Incomplete data*. New York. (United Nations Manuals).

Course Code: POP 307 Course Title: Sexual and Reproductive Health and Rights

Credits: 04 **Course Type**: Core

Rationale of the Course: This course develops students' understanding of sexual and reproductive health and rights (SRHR) from national and global perspectives. It is deliberately sequenced so that the work becomes more demanding as the semester progresses, moving from understanding ideas to using them, and finally to judging policy and designing responses. Students begin with the foundational concepts of SRHR as they are understood from diverse perspectives, including universal access and a rights-based approach, and with the historical development of the field — in particular the shift in thinking that followed the International Conference on Population and Development (ICPD) and what it has meant for Bangladesh. They then turn to how services are actually organised and delivered, covering maternal and newborn health, family planning, safe abortion, STI/RTI prevention, adolescent- and youth-friendly services, advocacy and comprehensive sexuality education, and what it takes for such services to be of good quality and genuinely accessible. Building on this, students examine patterns of SRH-related illness and death — maternal, infant and child health, STIs and HIV/AIDS, menstrual health and mental health — along with the SRHR challenges facing Bangladesh and other developing countries and the heightened risks that arise during humanitarian crises. The course closes with students assessing national SRHR policies, strategies and programmes against the Sustainable Development Goals and working out evidence-based responses to emerging SRHR issues. Because much of the subject matter is culturally sensitive, the more demanding tasks are introduced gradually with structured support, and all discussion is conducted under ground rules on confidentiality and respectful disagreement agreed in the first session.

Course Learning Outcomes:

CLO 1	**Remember** the core concepts and terminology of sexual and reproductive health and rights (SRHR): sexual health, sexual rights, reproductive health, reproductive rights and bodily integrity — as set out in WHO and ICPD frameworks and state the principal challenges and controversies surrounding their universal application.
CLO 2	**Understand** the historical evolution of SRHR and how the ICPD Programme of Action (1994) reframed population policy as a rights-based agenda within global health governance and within Bangladesh's population and health policy.
CLO 3	**Apply** life cycle and rights-based frameworks to given service-delivery scenarios in maternal and newborn health, family planning and contraception, safe abortion and menstrual regulation, STI/RTI prevention, and adolescent- and youth-friendly services, in order to recommend an appropriate service response for a specified population group.
CLO 4	**Analyze** national and global SRH morbidity and mortality data to differentiate the biological, behavioral, social and structural determinants that produce inequities in SRHR outcomes, including humanitarian settings.
CLO 5	**Evaluate** SRHR policies, strategies and programs in Bangladesh against SDG targets 3.7 and 5.6 and their associated international indicators, justifying judgements on explicit criteria of equity, coverage, quality and rights compliance.
CLO 6	**Design** an evidence-based advocacy brief or programme proposal that addresses an emerging SRHR issue — such as adolescent sexual and reproductive health, gender-based violence, child marriage, or stigma relating to gender identity and sexual orientation — in the Bangladesh or global context.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	X	X			
CLO 2	X	X		X	X
CLO 3	X	X	X		X
CLO 4	X	X	X	X	X

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 5	X		X	X	X
CLO 6	X	X	X	X	X

Summary of Course Content:

Sl No	Topic	Hours	Alignment to CLO
1.	**Concepts of Sexual and Reproductive Health and Rights (SRHR):** Sexual health; sexual rights; reproductive health; reproductive rights; bodily integrity; life cycle approach to SRHR; universal access from a rights perspective; challenges and controversies surrounding SRHR. Intersectionality and social determinants, including poverty, education, migration, disability, race/ethnicity, and the rural-urban divide, are shaping SRHR access and outcomes.	8	CLO 1, CLO 4
2.	**Historical Context of SRHR:** Evolution of policy frameworks and recognition of SRHR in global and national health agendas; impact of International Conference on Population and Development (ICPD) on SRHR issues globally and in Bangladesh; challenges and limitations in ICPD Implementation.	8	CLO 2
3.	**SRHR Services and Programs:** Access to quality SRHR services; maternal and newborn health; family planning and contraceptives; safe abortion; infertility services; STI/RTI prevention strategies; adolescent and youth-friendly services; advocacy, health education, and comprehensive sex education (integrated approach); digital innovations (mHealth, telehealth) presented as case studies.	10	CLO 3
4.	**SRH-related Morbidity and Mortality:** Maternal, infant, and child morbidity and mortality; SRH issues beyond maternal health, gender rights, and inequities; STI/RTI and HIV/AIDS burden; menstrual health & hygiene; SRH-related global and national trends; links between SRHR and mental health	8	CLO 4
5.	**Issues of SRHR in Bangladesh and Global Context:** Child marriage; early pregnancy; gender-based violence; adolescent sexual and reproductive health; unsafe abortion and menstrual regulation (MR); STIs and HIV/AIDS; Stigma and discrimination regarding gender identity and sexual orientation; digital divide & misinformation.	10	CLO 4 CLO 6
6.	**SRHR in Crisis Situations:** Effects of humanitarian crises (climate crisis, conflicts, other emergencies) on SRHR-related issues of vulnerable groups, especially for women; integration of SRHR into humanitarian responses following international guidelines.	8	CLO 3 CLO 4
7.	**SRHR-related Policies, Strategies, and Programs in Bangladesh:** Addressing SRHR issues in existing policies, strategies, and programs in Bangladesh; comparison with developing and developed countries; alignment with Sustainable Development Goals, achievements, and challenges	8	SLO 5 CLO 6
		Total = 60 Hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑			☑
Analyse		☑	☑	☑	☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar with the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond their control, they will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Textbooks

1. Brown, K. S. (2025). *Women's reproductive and sexual health*. Routledge.
2. Bitzer, J., & Mahmood, T. A. (Eds.). (2024). *Textbook of contraception, sexual and reproductive health*. Cambridge University Press.

Reference Books

1. Parker, R., & Aggleton, P. (2010). *Routledge handbook of sexuality, health and rights*. New York: Routledge.
2. Ussher, J. M., Chrisler, J. C., & Perz, J. (Eds.). (2020). Routledge international handbook of women's sexual and reproductive health. New York: Routledge.

Other Resources (Online Resources or others)

1. Abreha, G. F., Adhanu, H. H., Aregawi, A. B., Wuneh, A. D., Tesfay, F., Lema, G. K., ... & Mulugeta, A. (2025). Exploring physical, sexual, and mental health consequences of gender-based violence among women and girls during conflict in Tigray, Ethiopia. BMC Public Health, 25(1), 2103. https://link.springer.com/article/10.1186/s12889-025-23349-0

2. Borji-Navan, S., Maleki, N., & Keramat, A. (2024). Efficacy of digital health interventions used for adolescents' sexual health: An umbrella review. Health science reports, 7(12), e70212. https://onlinelibrary.wiley.com/doi/full/10.1002/hsr2.70212
3. Craig, A., Lawford, H., Miller, M., Chen-Cao, L., Woods, L., Liaw, S. T., & Godinho, M. A. (2025). Use of Technology to Support Health Care Providers Delivering Care in Low-and Lower-Middle-Income Countries: Systematic Umbrella Review. Journal of Medical Internet Research, 27, e66288. https://www.jmir.org/2025/1/e66288
4. Guttmacher Institute. (2025). *Protecting global sexual and reproductive health and rights in the face of retrograde US policies*. https://www.guttmacher.org/article/2025/04/protecting-global-sexual-and-reproductive-health-and-rights-face-retrograde-us
5. Howard, L. M., Wilson, C. A., Reilly, T. J., Moss, K. M., Mishra, G. D., Coupland-Smith, E., & Oram, S. (2025). Women's reproductive mental health: currently available evidence and future directions for research, clinical practice and health policy. World Psychiatry, 24(2), 196-215. https://onlinelibrary.wiley.com/doi/full/10.1002/wps.21305
6. Lassi, Z. S., Wade, J. M., & Ameyaw, E. K. (2025). At the crossroads: Intersectional approaches to women's health equity. Women's Health, 21, 17455057251356890. https://doi.org/10.1177/17455057251356890
7. Paul, M., RamPrakash, R., Govender, V., & Sundewall, J. (2024). An Intersectional Feminist Approach for Advancing Sexual and Reproductive Health and Rights Through Universal Health Coverage. In Oxford Research Encyclopedia of Global Public Health. https://doi.org/10.1093/acrefore/9780190632366.013.227
8. World Health Organization. (2015). *Sexual and reproductive health and rights: A global development, health and human rights priority*. World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/206544/WHO_RHR_HRP_16.06_eng.pdf

Course Code: POP 308 Course Title: Principles of Epidemiology

Credits: 04 **Course Type:** Core

Rationale of the Course:
Epidemiology is important for understanding how diseases spread, why they happen, and how to treat them in groups of people. The goal of this course is to give students both theoretical knowledge and practical skills so they can look at health-related events and use epidemiological principles in real life. It gives students the tools they need to look at disease patterns, spot risk factors, and use data to make public health decisions that are based on evidence. The course focuses on prevention, the importance of policy, and improving health systems. It teaches students how to use critical thinking, analytical reasoning, and ethical practice to solve current population health problems in both national and international settings.

Course Learning Outcomes:

CLO 1	Remember the fundamental concepts, principles, and terminology of epidemiology, including its historical development and role in understanding population health.
CLO 2	Understand the key measures of disease frequency and association—such as incidence, prevalence, mortality, relative risk, and odds ratio—and explain their significance in analyzing disease patterns.
CLO 3	Apply epidemiological study designs—such as cross-sectional, case–control, cohort, ecological, and intervention studies—to investigate disease distribution and determinants in different population contexts.
CLO 4	Analyze epidemiological data to identify trends, determinants, and relationships between exposure and outcomes, recognizing bias, confounding, and other sources of error.
CLO 5	Evaluate the validity, reliability, and applicability of epidemiological evidence to inform public health policy, program implementation, and disease prevention strategies.
CLO 6	Create a basic epidemiological research design or surveillance plan to address a specific health problem, integrating ethical principles, data management, and analytical approaches.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	**PLO 2**	**PLO 3**	**PLO 4**	**PLO 5**
CLO 1	**√**	**√**			
CLO 2	**√**	**√**		**√**	
CLO 3		**v**	**√**		**√**
CLO 4			**√**	**√**	
CLO 5	**√**		**√**	**√**	**√**
CLO 6			**√**	**√**	**√**

Summary of Course Content:

Sl No	**Topic**	**Hours**	**Alignment to CLO**
1.	**Basic concepts and their applications in epidemiology:** Goals and sources of scientific knowledge in public health; studying epidemiology; objectives and scope of epidemiology; the epidemiological approach; applications of epidemiology in public health; history and development	4	CLO 1

Sl No	Topic	Hours	Alignment to CLO
	of epidemiology; from epidemiological observations to preventive measures in human populations; agent, host and environment and the epidemiologic triad; natural history and spectrum of disease; the iceberg concept of disease; levels of prevention – primordial, primary, secondary and tertiary; infectious diseases and social change.		
2.	**The dynamics of disease transmission:** Modes of transmission; effect of modes of transmission on public health strategies; models of causation of disease; endemic, epidemic and pandemic; disease outbreaks; exploring occurrence of disease; incubation and latency periods; spectrum of disease from subclinical infection to clinical illness; herd immunity and the herd immunity threshold; basic and effective reproduction numbers; serial interval; carriers and asymptomatic transmission; index, primary and secondary cases; secondary attack rate; construction and interpretation of the epidemic curve.	4	CLO 2
3.	**Epidemiological measures of health and disease:** Measures of disease frequency – incidence, risk or cumulative incidence, and prevalence; person-time at risk; risk versus rate; relationship between incidence, prevalence and duration; mortality frequency measures – crude, specific, case fatality, proportional mortality and maternal mortality ratio; crude, category-specific and adjusted measures; direct and indirect standardisation; standardised mortality ratio; measures of association – risk ratio, rate ratio, odds ratio, attributable (absolute) risk, population attributable (absolute) risk and population attributable fraction; ratio versus difference measures; years of potential life lost; disability-adjusted and quality-adjusted life years; uses of frequency measures.	6	CLO 1 CLO 2 CLO 3
4.	**Classification of epidemiological study designs:** Descriptive versus analytic studies; hypothesis generation versus hypothesis testing; the comparison group as the dividing line; when a cross-sectional survey becomes analytic; observational versus experimental studies; assignment versus observation of exposure; implications for confounding and causal inference; the place of randomisation and its limits; the position of quasi-experimental studies; locating each design within the classification – correlational (ecological), case report and case series, cross-sectional, cohort, case–control, randomised controlled trial, community trial and quasi-experimental; matching design to research question; comparison of designs by cost, time, feasibility, ethics and susceptibility to bias; the hierarchy of evidence and its limits.	4	CLO 1 CLO 2 CLO 3
5.	**Descriptive studies and descriptive study designs:** Descriptive epidemiology by person, place and time; the role of descriptive work in generating hypotheses; correlational (ecological) studies – design, aggregate and routine data sources, international comparison and time-trend analysis; the ecological fallacy; case reports and case series – identifying new conditions, adverse effects and emerging hazards; absence of a comparison group as the defining limitation; cross-sectional surveys – design, sampling and prevalence estimation; temporal ambiguity; prevalence–incidence (Neyman) bias; analytic uses of cross-sectional data; strengths and weaknesses; comparison with other study designs.	6	CLO 2 CLO 3 CLO 4

Sl No	Topic	Hours	Alignment to CLO
6.	**Cohort studies:** Overview of cohort studies; prospective, retrospective and ambidirectional designs; open and closed cohorts; types of populations studied; issues in the selection of cohort study populations; characterization of exposure; sources of information on exposures and other key variables; follow-up and outcome assessment; timing of cohort studies; calculation and use of person-time; loss to follow-up; competing risks; the healthy worker effect; nested case–control and case–cohort designs; strengths and limitations of cohort studies.	6	CLO 2 CLO 3 CLO 4
7.	**Case–control studies:** The changing view of case–control studies; uses of the case–control method; selection of cases and controls; sources of case and control identification; methods for sampling controls – density, cumulative-incidence and case-cohort sampling; hospital-based versus population-based controls; number of controls per case; matching, matched analysis and overmatching; sources of exposure information; recall and selection bias and strategies to limit them; the odds ratio as an estimator of the risk ratio; the rare disease assumption; applications, strengths and limitations of case–control studies.	6	CLO 2 CLO 3 CLO 4
8.	**Experimental and quasi-experimental studies:** Purpose of an intervention study; randomised controlled trials – rationale for randomisation, sequence generation, allocation concealment, blinding and placebo control; eligibility criteria, run-in periods and adherence; measuring the outcome; intention-to-treat versus per-protocol analysis; loss to follow-up; interim analysis, stopping rules and data monitoring committees; trial phases; ethical issues – equipoise, informed consent and trial registration; the CONSORT statement; community and cluster-randomised trials – the community as unit of allocation, design effect, stepped-wedge designs, contamination between clusters, vaccine and health promotion field trials; quasi-experimental designs – one-group pre-test/post-test, non-equivalent control group, interrupted time series, regression discontinuity and difference-in-differences; natural experiments; threats to internal validity – history, maturation, regression to the mean, testing effects and selection; when a quasi-experimental design is the only feasible or ethical option; strengths and weaknesses.	6	CLO 2 CLO 3 CLO 4
9.	**Analysis of epidemiologic studies – chance, bias, confounding and measurement error:** Interpreting the results of a study; the role of chance – null hypothesis, p-values and their interpretation, confidence intervals, type I and type II error, statistical power and sample size, multiple comparisons, statistical significance versus public health importance; the role of bias – selection bias including non-response, loss to follow-up, healthy worker and Berkson bias; information bias including recall, interviewer and surveillance bias; misclassification of exposure and outcome; differential versus non-differential misclassification; the role of confounding – conditions a confounder must satisfy, confounder versus mediator versus collider, control by restriction, matching, stratification, Mantel–Haenszel adjustment, standardisation and multivariable regression; effect modification – distinction from confounding, additive and multiplicative scales, stratum-specific estimates and tests for interaction; measurement error – validity and reliability, systematic and random error, and the direction of bias produced.	6	CLO 3 CLO 4 CLO 5 CLO 6

Sl No	Topic	Hours	Alignment to CLO
10.	**Causality and the measurement of public health impact:** From association to causation; the counterfactual and potential-outcomes account of a cause; necessary and sufficient causes; the sufficient-component-cause (causal pie) model; the web of causation and multicausality; criteria for causal inference – strength, consistency, specificity, temporality, biological gradient, plausibility, coherence, experimental evidence and analogy; uses and limitations of the Bradford Hill criteria; the primacy of temporality; directed acyclic graphs and the selection of variables for adjustment; measuring public health impact – attributable risk and attributable risk per cent, population attributable risk and population attributable fraction, preventable fraction, number needed to treat and number needed to harm; individual versus population impact; high-risk versus population strategy of prevention; the prevention paradox.	4	CLO 4 CLO 5 CLO 6
11.	**Epidemiological surveillance, routine data and outbreak investigation:** Public health surveillance – purposes and methods; passive, active, sentinel, syndromic and event-based surveillance; case definitions and the notifiable disease system; attributes of a surveillance system – sensitivity, timeliness, representativeness, simplicity, flexibility, acceptability and predictive value positive; evaluating a surveillance system; types of routine data; controlling for age and other confounders; limitations of routine data; enhancing the value of routine data; the International Health Regulations and integrated disease surveillance and response; outbreak investigation – confirming the outbreak and verifying the diagnosis, case definition and case finding, the line list, descriptive analysis by person, place and time, the epidemic curve and point-source, continuous common-source and propagated patterns, overall and food-specific attack rates, hypothesis generation and testing, environmental and laboratory investigation, control and prevention measures, communication of findings and the outbreak report.	4	CLO 3 CLO 5 CLO 6
12.	**Screening and test evaluation:** Definition and purpose of screening; criteria for screening – the Wilson and Jungner criteria; ethics of screening; test evaluation – the two-by-two table of test result against true disease status; sensitivity and specificity; positive and negative predictive value; the effect of disease prevalence on predictive value; false positives and false negatives and their costs; positive and negative likelihood ratios; choice of cut-off and the sensitivity–specificity trade-off; receiver operating characteristic curves and area under the curve; sequential and parallel testing; reliability and inter-rater agreement using Cohen's kappa; evaluating screening programmes; study designs for evaluating screening; lead-time bias, length-biased sampling, overdiagnosis and volunteer bias; mortality rather than survival as the outcome measure.	4	CLO 5 CLO 6
		Total = 60 Hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	√	√			√	
Understand	√	√	√	√	√	√
Apply			√		√	
Analyse			√		√	√
Evaluate			√			√
Create			√	√		√

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	√				
Understand	√				
Apply	√				
Analyse	√				
Evaluate	√				
Create	√				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Textbooks:

1. Gordis L (2004) Epidemiology, 3rd edn. Elsevier-Saunders, Philadelphia
2. Aschengrau A & Seage GR. Essentials of Epidemiology in Public Health. Sudbury, Massachusetts: Jones and Bartlett Publishers, 2013.
3. Bailey, Lucianne; Vardulaki, Katerina; Langham, Julia; and Chandramohan, Daniel. Introduction to Epidemiology, Second Edition. UK: McGraw-Hill Education, 2011.
4. Celentano, D. D., Szklo, M., & Gordis, L. (2019). Gordis epidemiology (6th edition.). Philadelphia, PA: Elsevier.
5. Dicker R, Coronado F, Koo D, Parrish RG. 2012. Principles of Epidemiology in Public Health Practice, 3rd Edition: CDC.

Reference Books:

1. Centers for Disease Control and Prevention (U.S.). Public Health Practice Program Office. (1992). Principles of epidemiology: an introduction to applied epidemiology and biostatistics [2nd ed].
2. Bonita, R., Beaglehole, R., & Kjellström, K. (2006). Basic epidemiology (2nd ed.). World Health Organization. http://whqlibdoc.who.int/publications/2006/9241547073_eng.pdf

3. Rothman, K. J., Greenland, S., & Lash, T. L. (2008). Modern epidemiology (3rd ed.). Philadelphia: Lippincott Williams & Wilkins.
4. Gregg, M. B. (Ed.). (2008). Field epidemiology (3rd ed.). New York: Oxford University Press.
5. Woodward, M. (2013). Epidemiology: Study design and analysis (3rd ed.). Boca Raton: Chapman & Hall/CRC.
6. Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). Experimental and quasi-experimental designs for generalized causal inference. Boston: Houghton Mifflin.
7. Porta, M. (Ed.). (2014). A dictionary of epidemiology (6th ed.). New York: Oxford University Press.

Course Code: POP 309 Course Title: Viva-Voce

Credits: 01 **Course Type:** Core

1. Rationale of the Viva-Voce

The Viva-Voce Examination at the end of every even semester (2, 4, 6, and 8) serves as an **intermediate milestone** in the undergraduate program. It ensures that students have acquired sufficient foundational knowledge in population, health, and development issues and can **articulate, integrate, and apply** this knowledge in oral form. This assessment develops students' ability to:

- Express and defend ideas clearly in front of an academic panel.
- Demonstrate understanding of the third-year coursework (Semesters 5 & 6).
- Connect classroom learning with practical and policy issues.
- Receive constructive feedback early, guiding their future learning trajectory.

2. Course Learning Outcomes (CLOs)

By the end of the Viva Voce Examination, students will be able to:

1. **Recall and explain** key concepts, theories, and methods learned in the fifth and sixth semesters. *(Remember, Understand)*
2. **Apply** demographic and public health concepts to simple problem-solving or case scenarios. *(Apply)*
3. **Communicate** knowledge orally in a clear, structured, and confident manner. *(Apply)*
4. **Reflect** on the relevance of early learning to population, health, and sustainable development issues. *(Evaluate)*

3. Evaluation Committee

- The **Viva Voce will be conducted by a 4-member Examination Committee** appointed by the Department.
- **Questions will be drawn from the courses taught during the third year (Semesters 5 & 6).**
- Each examiner may ask questions, and marks will be awarded individually, which will then be averaged.

4. Evaluation Criteria (100 Marks; 1 Credit Equivalent)

Each student will face about **10 minutes of oral questioning** by the examination committee. Students will be assessed on the following criteria:

Sl No.	Component	Description	Marks
1.	Conceptual Understanding	Accuracy in recalling and explaining key concepts, definitions, and theories from Semester 5 and 6 courses.	25%
2.	Application & Problem-Solving	Ability to apply concepts/methods to minor case problems, scenarios, or data excerpts.	25%
3.	Integration & Reflection	Ability to link foundational knowledge to broader population, health, and development issues.	20%
4.	Communication Skills	Clarity, confidence, logical flow, and academic language in oral responses.	20%
5.	Professionalism	Attitude, engagement with examiners, and academic integrity during the exam.	10%

Fourth Year Seventh Semester

Course Code: POP 401 Course Title: Population Dynamics of Bangladesh

Credits: 04 **Course Type:** Core

Rationale of the Course: This course will introduce population dynamics in Bangladesh, its determinants, and related issues in the national context. It will seek to understand Bangladesh's population dynamics by explaining the basic demographic processes and other past, present, and future issues. This course will provide insights into the changes in demographic phenomena and their impact in Bangladesh with a specific focus on the overview of Bangladesh's population, age-sex transition and demographic dividend in Bangladesh, marriage dynamics in Bangladesh and its implications, fertility transition in Bangladesh; mortality and health transition in Bangladesh; population mobility and movement in Bangladesh; population mobility and movement in Bangladesh; population aging in Bangladesh; nutrition in Bangladesh; consequences of population dynamics in Bangladesh: health, environment, urbanization; future population of Bangladesh: issues and challenges; population policy and family planning programs in Bangladesh.

Course Learning Outcomes:

CLO 1	**Remember** key demographic concepts, indicators, historical trends, and the current population profile of Bangladesh.
CLO 2	**Understand** the trends, patterns, and determinants of marriage, fertility, mortality, migration, age structure, population ageing, health, and nutrition in Bangladesh.
CLO 3	**Apply** demographic concepts and indicators to interpret population data and explain demographic transitions in Bangladesh.
CLO 4	**Analyze** the interrelationships among demographic processes and their consequences for health, nutrition, the environment, urbanization, and socioeconomic development in Bangladesh.
CLO 5	**Evaluate** the challenges and opportunities arising from demographic change and the effectiveness of population policies, family planning programmes, and related interventions in Bangladesh.
CLO 6	**Create** an evidence-informed policy or programme framework to address a specific current or future population challenge in Bangladesh.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	x				
CLO 2	x				
CLO 3	x	x			
CLO 4	x	x			
CLO 5			x	x	x
CLO 06		x	x	x	x

Summary of Course Content:

Sl No	Topic	Hours	Alignment to CLO
1.	Overview of Bangladesh Population: Population Size, Growth, Geographical Distribution, Density	6	CLO 1 CLO 3
2.	Age-Sex Transition and Demographic Dividend in Bangladesh: Challenges and Opportunities of Reaping Demographic Dividend	6	CLO 2 CLO 4

Sl No	Topic	Hours	Alignment to CLO
			CLO 5
3.	Marriage Dynamics in Bangladesh and Its Implications: Trends, Patterns, and Differentials of Marriage; Determinants of Marriage and Child Marriage in Bangladesh; Implications of Marriage on Fertility in Bangladesh	6	CLO 2 CLO 4
4.	Fertility Transition in Bangladesh: Trends, Patterns, and Differentials of Fertility; Determinants of Fertility Transitions in Bangladesh; Challenges of Achieving Replacement Level Fertility in Bangladesh	6	CLO 2 CLO 4
5.	Mortality and Health Transition in Bangladesh: Trends, Patterns, and Differentials of Mortality; Epidemiologic and Health Transition in Bangladesh; Determinants of Epidemiologic and Health Transitions in Bangladesh	6	CLO 2 CLO 4
6.	Population Mobility and Movement in Bangladesh: Trends, Patterns and Causes of Internal Migration in Bangladesh	6	CLO 2 CLO 4
7.	Population Mobility and Movement in Bangladesh: Trends, Patterns Causes and Consequences of International Migration in Bangladesh	6	CLO 2 CLO 4
8.	Population Ageing in Bangladesh: Current Situation, Major Challenges and Policy Priorities for Older Population in Bangladesh	6	CLO 2 CLO 4
9a.	Nutrition in Bangladesh: Trends of Nutritional Status; Causes and Consequences of Nutrition/Malnutrition in Bangladesh	6	CLO 2 CLO 4
9b.	Consequences (Past, Present and Future) of Population Dynamics in Bangladesh: *Health**	2	CLO 4
9c.	Consequences (Past, Present and Future) of Population Dynamics in Bangladesh: *Environment*	2	CLO 5
10	Future Population of Bangladesh: Issues, Challenges and Strategic Priorities	2	CLO 5 CLO 6
		Total = 60 Hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑	☑	☑	☑	☑
Understand	☑		☑	☑	☑	☑
Apply	☑		☑	☑	☑	☑
Analyse	☑		☑	☑	☑	☑
Evaluate	☑		☑	☑	☑	☑
Create	☑		☑	☑	☑	☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				

Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks/Monographs/Book Chapters:

1. Gould, Bloom, David E., David Canning, and Jaypee Sevilla. 2003. The Demographic Dividend: a New Perspective on the Economic Consequences of Population Change. Santa Monica, Calif: Rand.
2. Jones, Gavin (ed). 2015. The Impact of Demographic Transition on Socio-economic Development in Bangladesh: Future Prospects and Implications for Public Policy, UNFPA, Bangladesh
3. Annett Fleischer, Melanie Lutz, and Jean-Olivier Schmidt. 2010. Population Dynamics in Bangladesh: A case study on the causes and effects of demographic change in Bangladesh, Division of Health, Education and Social Protection GTZ-Section: New Socio-Political Perspectives.
4. Caldwell, John C et.al.1999. The Bangladesh Fertility Decline: An Interpretation, Population and Development Review, Vol. 25, No. 1 (Mar., 1999), pp. 67-84
5. Adnan, Shapan. 1998. Fertility Decline under Absolute Poverty: Paradoxical Aspects of Demographic Change in Bangladesh, Economic and Political Weekly, Vol. 33, No. 22 (May 30 - Jun. 5, 1998), pp. 1337-1348
6. Khuda, Barkat-e- and and MianBazle Hossain. 1996. Fertility decline in Bangladesh: toward an understanding of major causes. *Health Transition Review, Supplement 6 1996, 155-167*
7. Hossain, Md. Bellal, Tehmina Ghafur, Mohammad Mainul Islam and Mohammad Sazzad Hasan (2015), *Trends, Patterns and Determinants of Marriage in Bangladesh, Population Monograph of Bangladesh*, Volume 13 (ISBN: 978-984-33-9948-9), November 2015, Bangladesh Bureau of Statistics, Government of Bangladesh.
8. Islam, Mohammad Mainul, Mohammad Sazzad Hasan, Mohammad Bellal Hossain and Tehmina Ghafur. 2016. The Prevalence and Determinants of Remarriage in Bangladesh, *Contemporary Perspectives in Family Research*, Vol.10, Emerald Publishing (Book title: *Divorce, Separation, and Remarriage: The Transformation of Family*; edited by Giovanna Gianesini & Sampson Lee Blair), October, 2016

Reference Books/Articles:

1. W. Brian Arthur and Geoffrey McNicoll, An Analytical Survey of Population and Development in Bangladesh Population and Development Review, Vol. 4, No. 1 (Mar., 1978), pp. 23-80

2. Mohammad Mainul Islam (2024). Population Dynamics and Demographic Change in Bangladesh: What are the Key Messages? *International Journal of Population Issues*, February 2024, Vol.1, No.1, https://doi.org/10.36312/ijpi.v1i1.181, e-ISSN, pp.69-70
3. Islam, M.M, Hossain, M. A, and Sanjowal, R. K. (2022). Bangladesh at Fifty: Changes and Challenges on Population and Development, *Journal of Governance Security & Development (JGSD), Volume 3, No. 1*, July 2022, DOI: http**//:**doi**.**org**/**10.52823/PNIF4859
4. Nabi, A.K.M. Nurun. 1992. Dynamics of Internal Migration in Bangladesh, pp. 81-98 in *Canadian Studies in Population*, Vol. 19 (1).
5. Khondker, BazlulHaque and Muhammad Moshiur Rahman. 'Some Estimates of First Demographic Dividend in Bangladesh: An Application of the Bangladesh National Transfer 4. Account' (Chapter 7) in Raihan, S. (Ed). (2016). *Structural Change and Dynamics of Labor Markets in Bangladesh: Studies on Labor and Employment.* Dhaka, SANEM Publications
6. Islam MM, Islam MK, Hasan MS, Hossain MB (2017). Adolescent motherhood in Bangladesh: Trends and determinants. *PlOS ONE* 12(11): e0188294. November 2017
7. Islam, Mohammad Mainul, SM Abdullah and Mohammad Bellal Hossain (2023). *'Age Structure Transition and Demographic Dividend in Bangladesh*,' PP. 109-139, Volume 6- Social Sciences for Life and Living, *Celebrating the 100 Years of the University of Dhaka: Reflections from the Alumni - International and National*, University of Dhaka, Bangladesh, June 2023
8. Wan He, Daniel Goodkind, Paul Kowal, Issa Saleem Almasarweh, Thanh Long Giang, Mohammad Mainul Islam, Samsik Lee, Bussarawan Teerawichitchainan, and Nai Peng Tey (2022). *Asia Aging: Demographic, Economic, and Health Transitions* U.S. Government (Report)Publishing Office, Washington, DC, June 2022, U.S. Census Bureau, International Population Reports, P95/22-1 https://www.census.gov/library/publications/2022/demo/p95-22.html

Course Code: POP 402 Course Title: Proposal Development for Research Monograph

Credits: 02 **Course Type**: Core

Rationale of the Course: This is a practical, workshop-based course whose single purpose is to prepare each student to carry out the four-credit research monograph. It covers the pre-empirical phase of research — everything that must be settled before a single item of data is collected — and it is taught by doing rather than by describing. Students begin from problem identification and then build one section of their own proposal at a time: narrowing a broad interest into a researchable problem; searching and screening the literature and organizing it into a review matrix; writing an evidenced introduction, problem statement and synthesized literature review; constructing a conceptual framework; formulating objectives, research questions, hypotheses and variables and testing their alignment; selecting and justifying a design, a study population and a sampling strategy; developing, translating and pre-testing a data collection tool; and preparing the ethical review documents, work plan and timeline. Every session pair a short conceptual input with a supervised workshop in which students draft, critique and revise a section of their own proposal, and every session ends with a named written output that becomes part of the final submission. Practical guidance is given throughout on the operational questions that decide whether a proposal works — how narrow a topic has to be, how many sources are enough, how to write a gap statement, how to phrase an item so that it can actually be answered, how to pre-test a tool with almost no money, and how to build a timeline backwards from the submission deadline. The fifteen topics correspond to the fifteen weekly two-hour sessions, so that one component of the proposal is built each week. The course is assessed on the two outputs a proposal must survive in practice: an oral presentation and defense, and a complete written proposal submitted together with its data collection tool.

Course Learning Outcomes:

CLO 1	Remember and describe the structure, purpose and component sections of an academic research proposal, the order in which those sections are actually developed, and the difference between an academic proposal and a grant or commissioned proposal.
CLO 2	Understand the pre-empirical logic of research — how a broad interest is narrowed into a researchable problem, how the hierarchy from research area to topic to general and specific questions to data collection questions is built, and how the empirical criterion governs what may usefully be asked, and how an ontological and epistemological position determines the approach adopted.
CLO 3	Apply systematic literature searching, screening and reference management to build a literature review matrix, and use it to write a precise title, an evidenced introduction and problem statement, a synthesised literature review, and a theoretical and conceptual framework derived from it.
CLO 4	Analyse the alignment running from title through objectives, research questions, hypotheses and variables to design, study area and population, sample size, sampling plan, data collection methods and tool, and justify each methodological decision against the research question and the practical limits of the monograph.
CLO 5	Evaluate and revise a proposal — their own and their peers' — against explicit criteria of clarity, internal alignment, feasibility, ethical soundness and adequacy of the data collection tool, and defend it orally under questioning.
CLO 6	Create a complete, submission-ready research proposal for the monograph, including the conceptual framework, methodology, ethical review documents, work plan and timeline, and a translated and pre-tested data collection tool.

Mapping Course Learning Outcomes to Program Learning Outcomes:

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	X	X	X		
CLO 2	X	X	X		

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 3	X	X	X		X
CLO 4		X	X	X	X
CLO 5			X	X	X
CLO 6	X	X	X	X	X

Summary of Course Content:

Sl No	Topic	Hours	Alignment to CLO
1.	**Orientation: the monograph and the anatomy of the proposal:** What the four-credit research monograph requires and how this course feeds it; the proposal as plan, contract and argument; why every weakness left in the pre-empirical stage is paid for during fieldwork; the full anatomy of the proposal — title, abstract, introduction, problem statement, justification and significance, literature review, theoretical and conceptual framework, objectives, research questions and hypotheses, methodology, ethics, work plan, budget, references and appendices; the order in which sections are actually written as against the order in which they appear; academic proposals compared with grant and commissioned proposals; assessment criteria, submission timetable and what a supervisor looks for. Practical tips: set up the proposal folder, reference library and proposal log in week one; keep every version numbered. **Output:** personal proposal work plan with dated milestones.	2	CLO 1
2.	**Identifying and selecting the research problem:** Sources of research problems — practice, policy, the literature, theory, field observation, replication and extension; moving from a broad interest to a narrow researchable problem; internal and external criteria; marks of a researchable problem — clarity, feasibility, significance, novelty, ethical acceptability, access to respondents and availability of supervision; common mistakes — the topic that is too broad, the question that cannot be answered, the question with no comparison, the question already settled; the "so what?" test; screening candidate problems against the time, money, access and skills actually available. Practical tips: use the narrowing funnel worksheet; state the problem in one sentence; carry three candidate problems and kill two on evidence. **Output:** one selected problem with written justification and the rejected alternatives.	2	CLO 1 CLO 2
3.	**Searching, screening and organizing the literature:** Building a search strategy — concepts, keywords, synonyms, Boolean operators, truncation and filters; databases and sources including PubMed, Scopus, Web of Science, Google Scholar, BanglaJOL, institutional repositories and government and agency grey literature; inclusion and exclusion criteria; screening titles and abstracts; citation chaining and snowballing; obtaining full texts; reference management in Mendeley, Zotero or EndNote and building the library correctly from the start; the literature review matrix — author, year, setting, design, sample, findings, limitations, gap and relevance to my study; note-taking that prevents accidental plagiarism; recognizing predatory journals; responsible and disclosed use of AI tools in searching and summarizing. Practical tips: keep a search log so the search can be repeated; read abstracts before downloading; stop when new sources no longer change the picture. **Output:** literature review matrix with	2	CLO 3

Sl No	Topic	Hours	Alignment to CLO
	search log.		
4.	**Writing the title, the introduction and the problem statement:** Functions of a title — a promise about scope, the basis of findability, the first thing an examiner judges; anatomy of a good title — core concepts or variables, study population, place, and where useful the design or time period; descriptive, declarative and question titles and when each is appropriate; use of a subtitle after a colon to carry the design or setting; length discipline of roughly ten to fifteen words; keywords for indexing and searchability; faults to avoid — "A study on…" and "An investigation into…" openers, abbreviations, jargon, cleverness, titles wider than the study or narrower than the objectives; why the title is drafted early and finalized last. The introduction — the funnel from broad context to narrowing setting and population, what is known, what is not known, why the gap matters, the problem statement and the purpose statement; distinguishing background, rationale, justification and significance; evidencing every claim. Practical tips: write five versions of the title and test each against the objectives; write the gap sentence in the "although … little is known …" form; one move per paragraph. **Output:** working title, draft introduction, problem statement and purpose statement.	2	CLO 3 CLO 4
5.	**Literature review: from matrix to synthesized argument:** Synthesis as against listing; organizing by theme, construct, geography or chronology rather than author by author; the synthesis paragraph — claim, evidence from several studies, points of agreement and disagreement, implication for the present study; comparing and contrasting findings and explaining why studies differ; the global, regional and Bangladesh structure; identifying and stating the gap explicitly rather than implying it; deciding what to include and what to leave out; citation density, paraphrasing and the sparing use of direct quotation; length and proportion relative to the whole proposal; plagiarism and similarity checking. Practical tips: convert the matrix into themes before writing a word; if a paragraph names only one study, it is a summary and not a synthesis. **Output:** synthesized literature review draft with an explicit gap statement.	2	CLO 3
6.	**Theoretical and conceptual frameworks and their link to the literature review:** Theory, theoretical framework and conceptual framework — what each is and how they differ; where each comes from, the theoretical framework from an existing body of theory and the conceptual framework from theory, literature and study context together; selecting a theory that actually fits the problem, with worked examples such as the health belief model, Andersen's behavioral model of health service use, the social-ecological model and the social determinants framework; how the literature review supplies the constructs, the relationships and the gap that the framework then diagrams; drawing the framework — constructs as boxes, hypothesized relationships as arrows, independent, dependent, mediating, moderating and background variables, and the boundary of the study; making every box and arrow traceable to a citation; writing the narrative that explains the diagram; operationalizing each construct into variables and indicators that the tool will actually measure. Practical tips: draw the framework before writing the review	2	CLO 3 CLO 4

Sl No	Topic	Hours	Alignment to CLO
	and revise both together; delete any construct the tool will not measure; a theory named once and never used again is decoration. **Output:** theoretical and conceptual framework diagram with explanatory narrative and a construct-to-variable table.		
7.	**Ontological and epistemological position and the approach of the study:** Ontology — what is taken to exist; objectivism and realism against constructionism; epistemology — how knowledge of it is possible; the positivist, interpretivist, critical or transformative and pragmatic positions; axiology and the place of values; positionality and reflexivity and why they must be declared; how the declared position determines the approach adopted — quantitative, qualitative or mixed methods — and, through it, the design, the sampling logic, the tool and the standards of quality; where the position statement sits in the methodology chapter, how long it should be and how it should be worded; matching position to approach to design to tool and checking the chain holds. Practical tips: write the position in one paragraph in your own words and then test it against your objectives; if changing the paragraph would change nothing else in the proposal, it has not been written properly. **Output:** one-paragraph ontological and epistemological position statement with justification of the approach.	2	CLO 2 CLO 4
8.	**Objectives, research questions, hypotheses and variables:** The hierarchy of concepts from research area to topic to general research question to specific research questions to data collection questions; the empirical criterion — can this be answered with data I can realistically obtain; writing the general objective and the specific objectives; action verbs such as assess, determine, compare, describe and explore, and the verbs to avoid; one objective for one measurable thing; research questions distinguished from objectives and from hypotheses; when a hypothesis is required and when it is not; null, alternative and directional hypotheses; variables — independent, dependent, background, control, confounding, mediating and moderating; operational definitions, indicators and measurement scales and the source of each; the alignment table linking every objective to its question, variables, operational definition, tool item and planned analysis. Practical tips: questions before methods, always; if the title, the objectives and the tool do not agree, the objectives are usually at fault; the alignment table is the single most effective check on a proposal. **Output:** general and specific objectives, research questions or hypotheses, and a completed alignment table.	2	CLO 2 CLO 4
9.	**Research design:** What a research design is and why it is the answer to the research question rather than a preference; quantitative designs — cross-sectional, longitudinal in its panel, cohort and trend forms, case–control, quasi-experimental and experimental; qualitative designs — phenomenology, ethnography, grounded theory, narrative inquiry and case study; mixed methods designs — convergent, explanatory sequential and exploratory sequential, with priority, sequence and points of integration; selecting the design and justifying it by naming the alternatives considered and the reason each was rejected; checking the design against time, cost, access, skills and ethics for a single-semester study; drawing the procedural diagram showing what happens, in what order, producing what. Practical tips:	2	CLO 4

Sl No	Topic	Hours	Alignment to CLO
	write the justification as one paragraph that names the question the design serves; a design that cannot deliver your objectives is the wrong design however fashionable it is. **Output:** research design section with procedural diagram and justification.		
10.	**Study area, study population and selection of the study population:** Defining and describing the study area — geographic, administrative or institutional boundaries; justifying the choice of area rather than merely describing it; what the area profile should contain, including location, population size, relevant socio-economic and health characteristics, service infrastructure and a map; sources for the profile such as BBS census and survey reports, union and upazila profiles, DHIS2 and facility records. Population definitions and the distinctions that must be kept clear — target population, study population, accessible population, sampling frame, unit of analysis and unit of observation; writing inclusion and exclusion criteria that an enumerator can apply without judgement; selecting respondents in practice — household listing, selection of the respondent within the household using the last-birthday or Kish grid method, selection of key informants and identification of hard-to-reach groups; permissions, gatekeepers, community entry and letters of introduction. Practical tips: write eligibility as a yes/no checklist; visit or map the area before finalizing it; state exactly who will be interviewed when more than one eligible person lives in a household. **Output:** study area description with map, study population definition, and inclusion and exclusion criteria.	2	CLO 4
11.	**Sample size and sampling plan:** Sample size for a single proportion and for a mean — the formula and each of its terms, the confidence level, the expected proportion and its source, the margin of error, the design effect and the adjustment for anticipated non-response; the finite population correction; sample size for comparing two groups and the meaning of power; using OpenEpi, Epi Info or G*Power and reporting the assumptions rather than only the answer; sample size in qualitative work — information power, saturation, and the usual ranges for in-depth interviews, key informant interviews and focus group discussions. The sampling plan — sampling frame and its source; probability techniques including simple random, systematic, stratified, cluster, multistage and probability proportional to size; allocation across strata; non-probability techniques including purposive, quota, snowball and convenience and the circumstances in which each is defensible; describing the selection procedure stage by stage so that another researcher could repeat it; policy on non-response and replacement. Practical tips: show the arithmetic and cite the source of every assumed value; draw a sampling flow diagram from population to final sample. **Output:** sample size calculation with assumptions, and a sampling plan with flow diagram.	2	CLO 4
12.	**Data collection methods:** Matching the method to the objective and to the declared approach; quantitative methods — face-to-face structured interview, self-administered questionnaire, telephone and web administration, observation checklist, record and register review, measurement and anthropometry, and secondary data analysis; qualitative methods — in-depth interview, key informant interview,	2	CLO 4

Sl No	Topic	Hours	Alignment to CLO
	focus group discussion, participant and non-participant observation, case study and document review; the strengths, costs and biases of each and the mode effects that follow from the choice; who collects the data — self-collection against trained enumerators, how many are needed, and their recruitment, training, supervision and payment; where and when data are collected, including setting, timing, duration, privacy and seasonality; recording the data on paper or digitally in Kobo Toolbox, ODK or Google Forms, and audio recording with consent; field quality control — spot checks, back-checks, re-interview, daily review of completed forms and error feedback; field logistics, transport, permissions and contingency. Practical tips: write the data collection procedure as a numbered sequence a stranger could follow; estimate minutes per interview and multiply before committing to a sample size. **Output:** data collection methods and field procedure section.		
13.	**Tool development, translation and pre-testing:** From objectives to variables to domains to items using the domain–item matrix; question types and response formats — closed, open, multiple response, Likert and other scales, ranking; levels of measurement and the analysis each permits; writing answerable items and avoiding double-barreled, leading, loaded, ambiguous, hypothetical and recall-heavy questions; response categories that are exhaustive and mutually exclusive; placement and phrasing of sensitive questions; question order, flow, screening questions, filters and skip patterns; using validated scales and indices, locating them, seeking permission and citing them; constructing composite scores; interview and focus group discussion guides — opening, domains, main questions, probes and closing, and how many questions an hour will bear; observation and record-review checklists; translation into Bangla and back-translation into English, and checking conceptual rather than literal equivalence; formatting for the field — numbering, interviewer instructions, consent statement, pre-coding for data entry; building and validating the digital form; pre-testing — how many respondents, chosen how, what to look for, and how each change is documented; version control of the tool. Practical tips: read every item aloud; pre-test on five people before anyone else sees it; if an item does not appear in the alignment table, delete it. **Output:** complete data collection tool in English and Bangla, with domain–item matrix and pre-test report.	2	CLO 4 CLO 6
14.	**Ethics, work plan, timeline, budget, references and appendices:** Ethical review — which committee, what documents are required and how long approval takes; the informed consent form, its required content and its readability in plain Bangla; assent for minors, verbal consent, thumb impression and witnessing; voluntariness, the right to withdraw, confidentiality, anonymity, pseudonymization, data storage, access and destruction; research with vulnerable participants, the distress protocol and referral pathways; risk and benefit assessment; incentives and undue inducement; permission letters and institutional approvals; plagiarism, similarity checking, authorship, conflict of interest and disclosed use of AI. The work plan and Gantt chart built backwards from the submission deadline; realistic durations for approval, fieldwork, entry, analysis and writing; the	2	CLO 6

Sl No	Topic	Hours	Alignment to CLO
	budget — transport, printing, enumerator payment, refreshment, transcription, translation, communication and contingency — with a justification line for each; referencing style, consistency and the errors reference managers introduce; the appendices — tool in both languages, consent form, alignment table, framework diagram, Gantt chart, budget and permission letters. Practical tips: submit for ethical approval earlier than feels necessary; test the consent form on someone with the least education among your likely participants. **Output:** ethics documents, work plan and Gantt chart, indicative budget, reference list and appendices.		
15.	**Assembling the proposal, peer review, presentation and defense:** Assembling the sections into a single coherent document and removing the seams; consistency of tense, voice, terminology and numbering; the internal alignment check running from title through objectives, framework, design, population, sample, methods and tool to the analysis plan; finalizing the title and writing the abstract last; formatting, pagination, word limits and submission requirements; structured peer review against the marking criteria and reading one's own work as a reviewer would; receiving criticism without defensiveness and keeping a revision log; preparing the presentation — slide structure covering problem, gap, objectives, framework, methodology, tool and timeline, one message per slide, time discipline, and presenting the framework and tool clearly; the defense — the questions examiners reliably ask about why this design, why this sample size, how the population will be reached and how the data will be analyzed; the common reasons proposals are returned for revision. Practical tips: run the pre-submission checklist; rehearse the defense aloud against a peer with a timer. Output: final written proposal with data collection tool, and proposal presentation and defense.	2	CLO 5 CLO 6
		Total = 30 Hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 25)

Bloom's Category	Class Attendance	Workshop Exercise	Draft Section Submission	Proposal Presentation
Remember	☑	☑		
Understand	☑	☑	☑	☑
Apply		☑	☑	☑
Analyze		☑	☑	☑
Evaluate		☑	☑	☑
Create		☑	☑	☑

SEE-Semester End Evaluation (Number of Marks 25)

Bloom's Category	Written Proposal Submission (with data collection tool)					
Remember	☑					
Understand	☑					

Bloom's Category	Written Proposal Submission (with data collection tool)					
Apply	☑					
Analyze	☑					
Evaluate	☑					
Create	☑					

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have one 2-hour class per week. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar with the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond their control, they will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Proposal /Term Papers. Late Proposal/Term Paper submission is allowed, but the students will be penalized for this. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks

1. English, L. J., O'Neal-McElrath, T., & Kanter, L. (2025). *Winning grants step by step: The complete workbook for planning, developing, and writing successful proposals*. John Wiley & Sons.
2. Locke, L. F., Spirduso, W. W., & Silverman, S. J. (2013). Proposals that work: A guide for planning dissertations and grant proposals. Sage Publications.

Reference Books

1. Thomas, C. G. (2021). Planning and Writing a Research Proposal. In Research Methodology and Scientific Writing (pp. 169-198). Cham: Springer International Publishing.
2. Coley, S. M., & Scheinberg, C. A. (2008). Proposal writing: Effective grantsmanship. Sage.
3. Punch, K. F. (2016). Developing effective research proposals (3rd ed.). London: SAGE Publications.
4. Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approach (5th ed.). Thousand Oaks, CA: SAGE Publications.
5. Bryman, A. (2016). Social research methods (5th ed.). Oxford: Oxford University Press.
6. Fowler, F. J. (2014). Survey research methods (5th ed.). Thousand Oaks, CA: SAGE Publications.
7. Mack, N., Woodsong, C., MacQueen, K. M., Guest, G., & Namey, E. (2005). Qualitative research methods: A data collector's field guide. Research Triangle Park, NC: Family Health International.

Other Resources (Online Resources or others)

1. Bell, J., & Waters, S. (2018). *Ebook: doing your research project: a guide for first-time researchers*. McGraw-hill education (UK).
2. Gitlin, L. N., Kolanowski, A., & Lyons, K. J. (2020). *Successful grant writing: Strategies for health and human service professionals*. Springer Publishing Company.
3. Hofmann, A. H. (2023). *Scientific writing and communication*. Oxford University Press.
4. Moore, N. (2006). *How to do research: a practical guide to designing and managing research projects*. Facet publishing.

5. National Science Foundation (NSF). (2023). *Proposal & Award Policies & Procedures Guide (PAPPG).* www.nsf.gov/publications
6. Punch, K. F. (2016). Developing effective research proposals.
7. Wisdom, J. P., Riley, H., & Myers, N. (2015). Recommendations for writing successful grant proposals: an information synthesis. *Academic Medicine*, *90*(12), 1720-1725.
8. Zina, O. (2021). *The essential guide to doing your research project*. Sage.

Course Code: POP 403 Course Title: Population, Poverty and Inequality

Credits: 04 **Course Type:** Core

Rationale of the Course: This course provides students with a comprehensive understanding of poverty—its measurement, theoretical foundations, and the trends and patterns associated with it. Students will learn the key concepts, theories, and empirical evidence related to inequality. Furthermore, this course offers students an in-depth understanding of the complex interactions between population dynamics, poverty, and inequality in both global and national contexts. Attention is given to the context of Bangladesh, analyzing the root causes of poverty and inequality, evaluating existing policies, identifying challenges, and exploring potential pathways for improvement. By integrating theoretical perspectives with real-world applications, the course will help students develop critical thinking skills to address the poverty and inequality concerns for development outcomes.

Course Learning Outcomes:

CLO 1	**Remember** and define the fundamental concepts related to poverty and its various classifications, causative factors, sources and cyclical nature along with inequality's concepts, causes, nature and sources.
CLO 2	**Understand** the various theories of poverty and inequality alongside diverse approaches and methodologies for measuring it.
CLO 3	**Apply** knowledge to assess the interrelationships among population dynamics (fertility, mortality, and migration), poverty, and inequality using theoretical and empirical perspectives.
CLO 4	**Analyze** the patterns of global and regional poverty and inequality and their policy implications and how population policies and economic systems influence inequality and poverty outcomes.
CLO 5	**Evaluate** different national and international policy initiatives (e.g., SDGs, poverty reduction programs, population control measures) and their effectiveness for development.
CLO 6	**Create** strategies and recommendations for addressing poverty and inequality concerns.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	☑	☑			
CLO 2	☑	☑			
CLO 3	☑	☑			
CLO 4	☑			☑	
CLO 5	☑			☑	☑
CLO 6	☑				☑

Summary of Course Content:

Sl No	Topic	Hours	Alignment to CLO
1.	**Concept and Dynamics of Poverty:** Basic definition of Poverty (Lack, Inability and Standard of Living), A Step-By-Step Procedure to Define Poverty, Causes and Consequences of Poverty, Vicious Circle of Poverty, Types of Poverty (Absolute Poverty & Relative Poverty), Economic Characteristics of High-Poverty Groups (Children and	8	CLO 1

Sl No	Topic	Hours	Alignment to CLO
	Poverty; Women and Poverty; Ethnic Minorities, Indigenous Populations, and Poverty; Rural Poverty)		
2.	**Theories and Measurement of Poverty:** Malthusian Theory, Structural Theories of Poverty, Conflict Theory, Cultural of Poverty, Capability Approach, Human Capital theory, Demographic Transition Theory, Poverty Indices (Headcount Ratio; The Poverty Gap Index; Squared Poverty Gap Index; Composite poverty measures (The Foster-Greer-Thorbecke Index);The Sen index; The Human Development Index (HDI); Human Poverty Index (HPI); Global Multidimensional Poverty Index, Relative Poverty Measures (Income Inequality: Gini-coefficient; Lorenz curve), Approaches to Measure Poverty (Direct Method, Indirect Method, Integration of Integration of the indirect and direct approach); Determination of Poverty Lines: Objective poverty line approach and The subjective approach, The direct caloric intake (DCI) method, The food-energy intake (FEI) method, The cost-of-basic-needs (CDN) method, Social indicators as Poverty Lines, Trends of Poverty Incidence - National, Rural, and Urban, Regional Disparities in Poverty, Major reasons for persistence of poverty in Bangladesh	10	CLO 1 CLO 2 CLO4
3.	**Population, Poverty, and Growth:** Population and Economic Growth, Poverty and Demography (Demographic Poverty Trap And Parenthood-Trap), Migration and Poverty, Fertility and Poverty, The Consequences of High Fertility: Some Conflicting Perspectives (It's Not a Real Problem; It's a Deliberately Contrived False Issue; It's a Desirable Phenomenon; It Is a Real Problem), The Demand for Children in Developing Countries, Son Preference, Economic Explanations for Son Preference, Implications for Development and Fertility, Growth and Poverty, Empirical Arguments: Seven Negative Consequences of Population Growth (Economic Growth; Poverty and Inequality; Education; Health; Food; Environment; International Migration)	8	CLO2 CLO 3 CLO4
4.	**Concept and Dynamics of Inequality:** Equity vs Equality, Concepts and Classification of Inequality, Importance of inequality, Inequality between Whom, Causes and Consequences of Inequality, Sources of Inequality, Inequality and Societal Consequences, Why Does Inequality Persist, Social stratification, Types of Societies and Social Differentiation, Types of Stratification (Caste System Vs Class System), Sources of Power In a Class System (Social Class, Social Status, Parties)	6	CLO 1 CLO 2
5.	**Theories and Measurement of Inequality:** Theories of social inequality (Structural Functional Theory, Conflict Theory, Progressive conflict theory, Trickle-Down Theory, Gini Coefficient and its four properties (the anonymity, scale independence, population independence, and transfer principles), The Lorenz Curve (four cases of Lorenz curves), Dualistic Development and Shifting Lorenz Curves: Some Stylised Typologies (modern-sector enlargement, modern-sector enrichment, traditional-sector enrichment*)*, Theil Index and Decomposability, Quantile ratio, Palma ratio, Kuznets's Inverted-U Hypothesis, Human Development Index (HDI), Gender Inequality Index (GII)	10	CLO 1 CLO 2

Sl No	Topic	Hours	Alignment to CLO
6.	**Poverty, Inequality, and Growth:** Links between Inequality and Poverty, Poverty is very Sensitive to Distribution Changes: The Theory, Distribution Changes in Practice, From Inequality to Growth, Why does Inequality Reduce Growth (Economic Factors vs Social Factors), From Growth to Inequality, Non-income Inequalities, Poverty and Growth, Relative Importance of Growth and Inequality in Reducing Poverty, Inequality as a Determinant of the Poverty Elasticity of Growth	8	CLO 3 CLO 4
7.	**Strategies and Policy initiatives for Addressing Poverty, and Inequality for inclusive Development:** Key Similarities and Differences Among Developing Countries, How Low-Income Countries Today Differ from Developed Countries in Their Earlier Stages, External Dependence and Unequal International Relations, The Persistent Effects of Colonial Forced Labour on Poverty and Development, The Meaning of Development (Amartya Sen's "Capability" Approach), Other perspectives of Development, Sustainable development Goals, Living Standards of Developing and Developed Nations (Divergence; Convergence; The Great Divergence; Relative Income Convergence at the Country Level; Conditional Convergence; Population-Weighted (Per Capita) Income Convergence, Absolute Income Convergence, World-As-One-Country Convergence, The Future of Convergence: Opportunities and Risks; Policy Options on Income Inequality and Poverty, The Need for a Package of Policies, Different Policy Measures for Mitigating Poverty and Inequality in Bangladesh, Policy Critics and Possibilities	10	CLO 4 CLO 5 CLO 6
		Total = 60 Hours	

Assessment Pattern

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply			☑		☑	☑
Analyze		☑	☑	☑	☑	☑
Evaluate			☑		☑	☑
Create			☑	☑	☑	☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				

Bloom's Category	Final Exam				
Apply	☑				
Analyse	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks

1. Razzaque, M. A., Khondker, B. H., & Raihan, S. (2011). Poverty, intra-household distribution and gender relations in Bangladesh: evidence and policy implications. *(The* University Press Limited), Bangladesh.
2. Todaro, M. P., & Smith, S. C. (2020). *Economic development*. Pearson UK.

Reference Books/Book Chapters/Articles

1. Titumir, R. A. M. (2021). Poverty and inequality in Bangladesh. In *Numbers and narratives in Bangladesh's economic development* (pp. 177-225). Singapore: Springer Singapore.
2. Sen, A. (1999). *Development as freedom*. New York: Knopf.
3. Yunus, M. (2017). *A world of three zeros: the new economics of zero poverty, zero unemployment, and zero net carbon emissions*. Hachette UK.
4. MARTÍN-GUZMÁN, P. (2005). Population and poverty. *Genus*, *61*(3/4), 167–184.
5. Dorling, D. 2010, Injustice; why social inequality persists, The Policy Press, Bristol.
6. Ravallion, M. (2015). *The economics of poverty: History, measurement, and policy*. Oxford University Press.
7. Adnan, S. (1998). Fertility declines under absolute poverty: Paradoxical aspects of demographic change in Bangladesh. *Economic and Political Weekly*, 1337-1348.
8. Conceicao, P. (2024). Human Development Report 2023/24. Breaking the Gridlock: Reimagining Cooperation in a Polarized World.

Course Code: POP 404 Course Title: Project Management, Monitoring, and Evaluation

Credits: 04 **Course Type:** Core

Rationale of the Course: Projects are essential instruments for translating policies, plans, and research evidence into practical interventions and measurable development results. Effective project management, monitoring, and evaluation are therefore critical for ensuring the efficient use of resources, accountability to stakeholders, organizational learning, and evidence-informed decision-making. This course equips students with the conceptual knowledge and practical skills required to design, plan, implement, monitor, and evaluate projects across their life cycles. Particular attention is given to project-management processes, stakeholder and problem analysis, the Logical Framework Approach, implementation monitoring, performance indicators, and evaluation criteria. Through these competencies, students will be prepared to contribute to well-managed and results-oriented projects in population, health, and broader development contexts.

Course Learning Outcomes

CLO 1	**Remember** key concepts, terminology, principles, and processes of project management, the project life cycle, monitoring, and evaluation.
CLO 2	**Understand** the relationships among project planning, implementation, monitoring, evaluation, accountability, learning, and development results.
CLO 3	**Apply** project-management tools to formulate objectives, activities, work plans, schedules, budgets, responsibilities, and monitoring arrangements.
CLO 4	**Analyze** stakeholders, problems, objectives, and alternative strategies and develop a coherent Logical Framework Matrix with indicators, means of verification, and assumptions.
CLO 5	**Evaluate** project design, implementation, performance, and results using appropriate monitoring evidence and evaluation criteria.
CLO 6	**Create** a comprehensive, evidence-informed project proposal and monitoring and evaluation framework for a specific population, health, or development issue.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	x			x	
CLO 2	x				
CLO 3	x	x			
CLO 4		x			
CLO 5			x	x	x
CLO 6		x	x	x	x

Summary of Course Content:

Sl No	Topic	Hours	Alignment to CLO
1.	**Basic concepts and techniques of Project Management:** Why management, Definition of Project Management Project Management Knowledge areas, Project Management Liaisons, Evolution of Project Management, What is Project, Program and Sector, Sector Wide Approach, Limitations of Projects, Project Life Cycle	9	CLO 1 CLO 2
2.	**Project Management Process:** What is the project management Process, steps in Project management	9	CLO 1 CLO 2 CLO 3

Sl No	Topic	Hours	Alignment to CLO
3.	**Project Planning:** The vision, mission, goals, objectives, and strategies of a project. Implementation at inception, execution, and phase-out stages. Phases of the project, the strategic context of the organizational and project planning, elements of planning.	10	CLO 3 CLO 4 CLO 6
4.	**Logical Framework Approach:** Background, what is it? Practical issues in applying the Log-frame approach, the analysis stage: preparatory analysis, stakeholder analysis, problem analysis, analysis of objectives, analysis of strategies, the analysis stage: the matrix format, terminology and the process of preparation, completing the draft Log-frame matrix, use of LFA.	15	CLO 4 CLO 6
5.	**Implementation, Monitoring:** Purpose, definition, main periods, and definition of monitoring, regular review, evaluation and audit, key tasks and responsibilities, key assessments, tools and documents, Information collection and use – overview, assessment criteria, and standards.	9	CLO 2 CLO 3 CLO 5
6.	**Project Evaluation:** Purpose and Principles of project evaluation, Tasks and responsibilities in evaluation, importance of evaluation for development, evaluation criteria.	8	CLO 5 CLO 6
	Total	**60 hours**	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	√	√	√		√	√
Understand	√	√	√	√	√	√
Apply	√		√		√	√
Analyse	√		√		√	√
Evaluate	√		√		√	√
Create	√		√	√	√	√

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	√				
Understand	√				
Apply	√				
Analyse	√				
Evaluate	√				
Create	√				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with

the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Learning Resources

Textbooks:

1. David I. Cleland (eds.). 1997. *Field Guide to Project Management.* New York: Van Nostrand Reinhold.
2. *A guide to the Project Management Body of Knowledge* (PMBOK). 1996. By Project Management Institute, 4 Campus Blvd., Newtown Squire, PA 19073.
3. David I. Cleland, Karen M. Bursic, Richard J. Puerzer, and Alberto Y. Vlasal. *The Project Management Casebook*. Project Management Institute, 4 Campus Blvd., Newtown Squire, PA 19073.
4. European Commission, Directorate-General for Development and Relations with African, Caribbean and Pacific States, *Aid delivery methods – Project cycle management guidelines*, Publications Office, 2005, Web: https://international-partnerships.ec.europa.eu/document/download/f7ed20c4-5fc2-4ed7-b54c-0805e4ed952d_en?filename=methodology-aid-delivery-methods-project-cycle-management-200403_en.pdf

Course Code: POP 405 Course Title: Population Estimations and Projections

Credits: 02 **Course Type:** Core

Rationale of the Course: This course provides students with foundational knowledge and practical skills in population estimation and projection. It covers comprehensive methods for projecting demographic components such as fertility, mortality, and migration, emphasizing both traditional demographic techniques and interdisciplinary approaches. Students will explore a variety of projection methodologies, including cohort-component models, time series analysis, and probabilistic forecasting, while also addressing challenges such as small-population forecasting and forecast accuracy. This course integrates demographic methods with insights from related fields such as regional science, economics, and social development, enabling students to apply robust projection techniques relevant to effective policymaking and population planning.

Course Learning Outcomes:

CLO 1	Remember the fundamental concepts, key terms, and basic principles related to population estimation and projection.
CLO 2	Understand various methods and approaches used in estimating and projecting populations, including different techniques and their theoretical foundations.
CLO 3	Apply appropriate techniques and tools to estimate and project population data, effectively incorporating assumptions and relevant inputs.
CLO 4	Analyze projection results by assessing accuracy and interpreting population trends, considering the assumptions and limitations of different methods.
CLO 5	Evaluate the suitability and limitations of various estimation and projection methods across different population settings and data contexts.
CLO 6	Create population projections and scenarios by integrating multiple approaches and assumptions to inform decision-making and planning.

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	**PLO 2**	**PLO 3**	**PLO 4**	**PLO 5**
CLO 1	x				
CLO 2	x	x			
CLO 3		x	x		x
CLO 4			x	x	x
CLO 5			x	x	x
CLO 6				x	x

Summary of Course Content:

Sl. No	**Topic**	**Hours**	**Alignment to CLO**
1.	Introduction to demographic estimation and projection, Application importance of population estimates and projection from a policy perspective, understanding population projection	2	CLO1, CLO4
2.	Basic terms of population projection (estimates, projections, forecasts); Different approaches of population projection; Common techniques for population projection;	4	CLO1, CLO2, CLO4
3.	Introduction to time series analysis; Frequently used times series model and demographic forecasts	4	CLO1, CLO2, CLO3, CLO4, CLO5
4.	Forecast accuracy and its importance in demographic projection; Measures used for forecast accuracy	2	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6

Sl. No	Topic	Hours	Alignment to CLO
5.	Introduction to UN population projection; UN methodology for population estimation; Practical: Using Demproj	4	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
6.	Method of fertility projection; Projection of future fertility; Features of fertility projection; Assumptions of fertility projection	2	CLO1, CLO2, CLO3, CLO4
7.	Different methods of fertility projection; parametric and non-parametric approaches, UN projection for fertility	2	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
8.	Projection of future mortality; Assumptions for mortality projection; UN Method of mortality projection	2	CLO1, CLO2, CLO3, CLO4,
9.	Other methods of mortality projection: parametric and non-parametric approaches; Lee-Carter method	2	CLO1, CLO2, CLO3, CLO4, CLO5, CLO6
10.	Projecting migration and setting assumptions; Challenges for projecting migration; Assumptions for migration projection UN method for projecting net migration	2	CLO1, CLO2, CLO3, CLO4, CLO5
11.	Projection methodology; Different methods: Cohort component methods, alternative methods, time series, microsimulation, multi-state cohort component projections, Uncertainty, Scenario, Probabilistic projection, choosing a population projection	2	CLO1, CLO2, CLO3, CLO4
12.	Challenges with small population; Methods for small area forecast	2	CLO1, CLO2, CLO4, CLO5, CLO6
		Total = 30 hours	

Assessment Pattern:

CIE-Continuous Internal Evaluation (Number of Marks 25)

Bloom's Taxonomy	Class Attendance (2.5)	Class Participation (5)		Term Paper (7.5)		Mid-Term (10)
		Presentation	Quiz	Lab	Assignment	
Remember	X		X			X
Understand	X		X	X	X	X
Apply	X			X	X	
Analyze	X			X	X	
Evaluate	X			X		
Create	X					

SEE-Semester End Evaluation (Number of Marks 25)

Bloom's Taxonomy	Final				
Remember	X				
Understand	X				
Apply					
Analyze	X				
Evaluate	X				
Create	X				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Reference Books:

1. Booth, H. (2006). Demographic forecasting: 1980 to 2005 in review. International journal of forecasting, 22(3), 547-581.
2. Keyfitz, N., & Caswell, H. (2005). Applied mathematical demography (Vol. 47). New York: Springer.
3. Mazzuco, S., & Keilman, N. (2020). Developments in demographic forecasting. Springer Nature.
4. DESA, U. N. (2022). World population prospects: the 2022 revision. Population division of the department of economic and social affairs of the United Nations Secretariat, New York, 18, 620-626.
5. Raftery AE, Chunn JL, Gerland P, Sevčíková H. Bayesian probabilistic projections of life expectancy for all countries. Demography. 2013 Jun;50(3):777-801.

Fourth Year Eighth Semester

Course Code: POP 406 Course Title: Population and Health Policies and Programs in Bangladesh

Credits: 04 **Course Type:** Core

Rationale of the Course: This course offers critical thinking about Bangladesh's population and health policies and programs. It also enables students to understand the concepts and debates relating to policies, the policymaking process, and evaluation, to analyze the roles of key population and health policy actors, and to consider the relationship between evidence and policy concerning population and health.

Course Learning Outcomes:

CLO 1	**Remember** and define the major concepts in policy-making process (important institutions and political character with the policies, plans, and programs related to population and health in Bangladesh)
CLO 2	**Understand** the multidisciplinary nature of different theoretical approaches used in policy making and analysis to review and evaluate the policies, plans, and programs on population and health in Bangladesh
CLO 3	**Apply** knowledge to identify key features of the processes of policy identification, formulation, and implementation of the population and health policies in Bangladesh
CLO 4	**Analyze** the political system within which population and health policies are made, implemented and the contextual factors that influence to change contemporary population and health policies and programs in Bangladesh
CLO 5	**Evaluate** the process of policy change and concisely describe realistic policy options on population and health in Bangladesh
CLO 6	**Create** exemplary evidence to analyze realistic policy framework

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	X				
CLO 2	X				
CLO 3	X	X			
CLO 4			X	X	X
CLO 5			X	X	X
CLO 6		X			X

Summary of Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction:** Defining Policy and the Field of Policy Studies; Basic Concepts of Policy Process; Scope and Focus of the Policy Process; Government, Politics, and Policy Analysis; Government Institutions and Policy Actors; Context of Policy Integration Population and Health Policies with Sustainable Development; Policy Challenges and Opportunities; Policy dynamics: stability and policy change;	8	CLO 1
2.	**Approaches to Policy Making:** Understanding Public Policymaking; The Policy Process Model Stages; Actors and Institutions; Policy Instruments; Identifying Policy Problems; Agenda Setting in Policy; Policy Formulation: Design and Tools; Models of the Policy Process; Policy Implementation	8	CLO 2

Sl No	Topic	Hours	Alignment to CLO
3.	**Framework for Policy Analysis:** Problem Identification and Definition; Establishing Evaluation Criteria; Identifying Policy Alternatives; Projecting Outcomes; Comparing Alternatives; Recommendation; Implementation and Feedback; Challenges of Policy Analysis	10	CLO 1 CLO 2
4.	**Population and Health as Policy Issues:** changing global population & health policy environment; Globalization and Policy context; Policy Focus Shifts; Population Policy Issues; Health Policy Issues; Review of Selected Policy, Plans, and Program Documents in Bangladesh (population policy & health policy); Case Studies: Programs and Interventions at the Grassroots (examining implementation and outcomes of community-level initiatives in Bangladesh);	10	CLO 1 CLO 2
5.	**Review of Selected Policy, Plans and Program Documents in Bangladesh:** Case Studies- Programs and Interventions at the Grassroots in Bangladesh; National Population Policy; National Health Policy (2011); National Nutrition Policy / Strategy; Health, Population and Nutrition Sector Development Program (HPNSDP, 2011–2016); Sectoral strategies for maternal, neonatal and child health; Bangladesh National Adolescent strategy; Five-Year Plans Urban health/primary care strategies; Social protection policy documents	10	CLO 2 CLO 3
6.	**Evaluating Policy, Plans and Programs in Bangladesh**: Importance of Policy Evaluation; Political Dimensions of Policy Evaluation; Formal and Informal Evaluation Processes; Types and Models of Policy Evaluation; Models of Evaluation	6	CLO 4
7.	**Population and Health Policies for Sustainable Development in Bangladesh:** Achievements and positive outcomes; Persistent gaps and emerging threats; Why population policy still matters for sustainability; Policy Priorities and Recommendations	8	CLO 5 CLO 6
		Total = 60 Hours	

Assessment Pattern

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply	☑		☑			☑
Analyze			☑	☑	☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				
Apply	☑				
Analyze	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Textbooks:

1. Thomas A. Birkland. 2011. *An Introduction to the Policy Process: Theories, Concepts, and Models of Public Policy Making*. (5th edition). Armonk, NY: Me.E. Sharpe.
2. Buse, K., Mays, N., & Walt, G. (2012). *Making health policy*. McGraw-Hill education (UK).
3. Kraft, M. E., & Furlong, S. R. (2019). *Public policy: Politics, analysis, and alternatives*. Cq Press.

Reference Books

1. Government of Bangladesh. 2012. Bangladesh Population Policy 2012, Ministry of Health and Family Welfare.
2. Government of Bangladesh. 2012. National Health Policy 2011. Ministry of Health and Family Welfare.
3. Government of Bangladesh. Health, Population, Nutrition Sector Program (HPNSP), 2024-2029
4. Eight Five Year Plan (2020-2025), General Economic Division, Ministry of Planning, Government of Bangladesh
5. Perspective Plan of Bangladesh (2021-2041, General Economic Division, Ministry of Planning, Government of Bangladesh
6. David A. Kindig, 'Understanding Population Health Terminology', The Milbank Quarterly, Vol. 85, No. 1, 2007 (pp. 139–161)
7. Paul Demeny. 2003. *Population Policy: A Concise Summary,* Population Council
8. May, John F. 2012. *World Population Policies: Their Origin, Evolution, and Impact*. 2012th ed. Springer
9. Buse K, et al. 2005. *Making Health Policy,* London: Open University Press

10. Government of Bangladesh. 2012. *Bangladesh Population Policy 2012,* Ministry of Health and Family Welfare.
11. Government of Bangladesh. 2012. *National Health Policy 2011*. Ministry of Health and Family Welfare.
12. Government of Bangladesh. Health, Population, Nutrition Sector Program (HPNSP), 2024-2029
13. Eight Five Year Plan (2020-2025), General Economic Division, Ministry of Planning, Government of Bangladesh
14. Perspective Plan of Bangladesh (2021-2041, General Economic Division, Ministry of Planning, Government of Bangladesh
15. Wolfgang Lutz. 2014. A Population Policy Rationale for the Twenty-First Century. Population and Development Review. doi:10.1111/j.1728-4457.2014. 00696.x
16. Vicente Navarro. 1987. What is a National Health Policy? *International Journal of Health Services*, Volume 37, Number 1, Pages 1–14, 2007
17. Talukder, MN et al (2022). Fifty Years of Family Planning in Bangladesh. Dhaka: The Population Council.
18. Ghafur T. (2017) *Policy Discourse and the Paradigm Shift in Reproductive Health in Bangladesh.* Cambridge Scholars Publishing.
19. Mohammad Mainul Islam (2019). Integration of Population and Development Issues into Plans and Policies, pp. 9-31, Bangladesh Monograph 5, Population Management Issues, General Economic Division (GED), Planning Commission of December 2019
20. Mohammad Mainul Islam (2005). Grassroots Views on Health Practices, Changes in Health Behavior and Policy Means for Health Communication in Bangladesh, *Bangladesh Sociological Studies: A Journal of BISR*, 2005, 1(1): 49-60, Dhaka: Bangladesh Institute of Social Research.

Course Code: POP 407 Course Title: Climate Change, Vulnerability, and Adaptation

Credits: 04 **Course Type:** Core

Rationale of the Course: This course introduces the intricate and dynamic concepts of climate change, vulnerability, and adaptation. The course focuses on societal and policy viewpoints when analyzing vulnerability and adaptation to climate change. Vulnerability and adaptation theories will be examined in this course. Using developing country policy and planning documents, the course reviews various policies that can reduce the impact of climate change at both the global and local levels.

Course Learning Outcomes:

CLO 1	**Remember** and define the major concepts in climate change, vulnerability, and adaptation
CLO 2	**Understand** the multidisciplinary nature of the evolution of climate change and its contemporary issues on vulnerability and adaptation.
CLO 3	**Apply** knowledge to understand different theories, analytical models and sources of information for climate change, vulnerability and adaptation
CLO 4	**Analyze** the causes and consequences of climate change and suggest sustainable measures
CLO 5	**Evaluate** different elements of climate change policy issues at national and sub-national scales
CLO 6	**Create** models or frameworks to understand the relationship between climate vulnerabilities and adaptation strategies to examine climate change policies and programs

Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	**X**				
CLO 2	**X**			**X**	
CLO 3	**X**				**X**
CLO 4	**X**			**X**	**X**
CLO 5			**X**	**X**	**X**
CLO 6			**X**	**X**	**X**

Summary of Course Content

Sl No	Topic	Hours	Alignment to CLO
1.	**Introduction: Climate change:** Basic concept of climate change; Weather, Climate, Weather variability; Vulnerability; Adaptation; Coping strategies; Climate Resilience; Emergence of the issue, Conference of Parties (CoP), Role of United Nations' Fund for Climate Change (UNFCCR)	6	CLO 1
2.	**Climate Change and Environment:** The global environmental issues; Resources; Pollutions; Carbone cycle; Carbone footprint; Interlinkage between climate change and environment.	8	CLO 1
3.	**Climate Change Vulnerability:** The concept of Vulnerability: definition and Issues; Vulnerability Methodologies and toolkit; Vulnerability index; State of Vulnerability: World scenario and Bangladesh**,** identify vulnerable populations and regions**,** Current Vulnerability and future Changes**,** Identify trends in climate change-related exposures	8	CLO 1

Sl No	Topic	Hours	Alignment to CLO
4.	**Mitigation and Adaptation to Climate Change**: Adaptation: Definition and Issues, Adaptation Issues and Climate Negotiation, Adaptation Planning, Adaption Advocacy, International Efforts to Facilitate Adaptation, Relationship with the Adaptation Policy Framework as a whole, Community Based Adaption, Develop Institutional capacity for adaptation, Develop a Monitoring and Evaluation Framework	10	CLO 3
5.	**International and National Frameworks for Climate Change:** Sendai Framework; Foga Framework; Hyago Framework; Environmental Management Framework; Social Management Framework	10	CLO 3
6.	**Population Climate Change and Development:** Poverty, livelihoods, and resilience; Gender and social inclusion in adaptation; Resilience and adaptive capacity; Development pathways and adaptation; Case Examples: Coastal livelihoods in Bangladesh affected by salinity intrusion and Adaptive livelihood diversification in drought-prone regions of Bangladesh.	8	CLO 4
7.	**Policy and Management:** Response/Role/Initiative from Bangladesh to adapt with the situation: Climate change, Bangladesh Climate change Adaptation Strategies; Bangladesh Climate Change Strategy and Action Plan (BCCSAP); NGO initiatives/International Donner Initiatives to support adaptation strategies in Bangladesh	10	CLO 5
	Total	**60 hours**	

Assessment Pattern

CIE-Continuous Internal Evaluation (Number of Marks 50)

Bloom's Category	Class Attendance	Quiz	Assignment	Reflection	Midterm Examination	Presentation
Remember	☑	☑			☑	
Understand	☑	☑	☑	☑	☑	☑
Apply	☑		☑			☑
Analyze			☑	☑	☑	☑
Evaluate			☑			☑
Create			☑	☑		☑

SEE-Semester End Evaluation (Number of Marks 50)

Bloom's Category	Final Exam				
Remember	☑				
Understand	☑				

Bloom's Category	Final Exam				
Apply	☑				
Analyze	☑				
Evaluate	☑				
Create	☑				

Course Policies and Procedures (including Makeup Class)

The course required 75% class attendance to appear in the semester final examination. A student can appear in the final examination by paying a fine of Taka 1000.00 if their class attendance is between 60 and 74%. However, a student will be considered discollegiate and not be allowed to appear in the semester final examination if their class attendance is less than 60%. The course will have two classes per week for 2 hours per class. Besides, the students can consult with their respective teachers during office hours with prior appointments. The academic calendar about the class and exam schedule will be provided at the beginning of the semester. However, if a teacher cannot take their class at the scheduled time for reasons beyond his control, he will arrange the make-up class in consultation with the students. The academic calendar will also provide a deadline for submitting the Assignment/Term Papers. Late Assignment/Term Paper submission is allowed, but the students will be penalized for this matter. Adopting unfair means /plagiarism in all evaluation systems will be considered a criminal offense and punished according to the University law.

Textbooks:

1. O'Nell Brain C.Mackellarf, Landis, 2001, *Population and Climate Change, Cambridge: Cambridge* University Press
2. McCarthy, J. J. (Ed.). (2001). *Climate change 2001: impacts, adaptation, and vulnerability: contribution of Working Group II to the third assessment report of the Intergovernmental Panel on Climate Change* (Vol. 2). Cambridge University Press.
3. Rajib Shaw, Fuad Mallick, et al. (2013). Climate Change Adaption Actions in Bangladesh (Disaster Risk Reduction). Japan, Springer.
4. Lal, R., Sivakumar, M. V., Faiz, S. M. A., Rahman, A. M., & Islam, K. R. (Eds.). (2010). *Climate change and food security in South Asia*. Springer Science & Business Media.
5. Sendai Framework for Disaster Risk Reduction 2015 – 2030
6. United Nations I S D R International Strategy for Disaster Reduction Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters Extract from the final report of the World Conference on Disaster Reduction (A/CONF.206/6)

Reference Books

1. AR6 Climate Change 2022: Impacts, Adaptation and Vulnerability February 2022
2. AR6 Synthesis Report: Climate Change 2023, Summary for Policymakers
3. Ministry of Environment and Forest Government of the People's Republic of Bangladesh National Adaptation Programme of Action (NAPA) Final Report November 2005
4. **Bangladesh** Climate Change Strategy and Action Plan (BCCSAP) 2009
5. Bangladesh Climate Change Impacts and Vulnerability A Synthesis

Course Code: POP 408 Course Title: Research Monograph
Credits: 04 **Course Type:** Core

1. Rationale of the Research Monograph: The Research Monograph is designed as a capstone requirement for undergraduate students to consolidate their disciplinary knowledge, research skills, and critical thinking in the field of population and health sciences. It provides a structured opportunity to independently design and execute a research project that integrates demographic theories, population data, and analytical methods to address pressing population, development, and health issues. Students will learn to link their findings with sustainable development perspectives and population policy concerns in global, regional, and national contexts. This course bridges theoretical learning and practical application, ensuring that graduates are equipped to conduct evidence-based inquiries, contribute to academic debates, and provide insights for policymaking.

2. Course Learning Outcomes (CLOs)

CLO 1	**Formulate** a clear and researchable problem statement on population, development, and health issues. *(Apply)*
CLO 2	**Synthesize and critique** existing literature to position research findings within global, regional, and national debates. *(Analyze/Evaluate)*
CLO 3	**Apply** demographic concepts and theories to design a relevant research framework. *(Apply/Analyze)*
CLO 4	**Collect, analyze, and interpret** population and health data using appropriate research methods. *(Apply/Evaluate)*
CLO 5	**Produce and present** a scholarly monograph that adheres to academic writing and referencing standards. *(Create)*
CLO 6	**Evaluate** population issues and policy implications in the context of sustainable development and management challenges. *(Evaluate/Create)*

3. Mapping Course Learning Outcomes to Program Learning Outcomes:

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	x			x	
CLO 2	x				x
CLO 3		x			
CLO 4			x		
CLO 5			x		x
CLO 6				x	x

4. Supervisory Guidelines

4.1 Supervisor Assignment

- Each student will **choose a faculty member as a supervisor** whose expertise aligns with their proposed research topic.
- To ensure fairness and manageable workloads, each faculty member will usually supervise up to **three students per academic year**. However, this quota may vary depending on departmental needs and faculty availability.
- Where multiple students select the same supervisor beyond the quota, allocation will be decided by the department in consultation with faculty and students to maintain balance.

4.2 Supervisor Roles

- Guide the student to topic refinement and assess the feasibility of the research.
- Provide feedback on proposal drafts, literature review, conceptual/theoretical framework, methodology, and data collection tools.
- Ensure the research proposal and protocol meet ethical and academic standards **before the end of the 7th Semester**.
- Mentor students on academic writing, presentation, and analytical skills.

4.3 Student Responsibilities

- Submit the research proposal and protocol and draft chapters on time.
- Finalize **data collection tools** (questionnaires, interview guides, etc.) with supervisor approval by **the end of the 7th Semester**.
- Maintain originality, ethical compliance, research integrity, and consistent engagement with supervisory feedback.
- Attend scheduled meetings and maintain professional conduct.

4.4 Supervisor–Student Interaction

- **Weekly meetings** throughout the two semesters.
- **A Logbook** must be maintained jointly by the supervisor and the student, recording meeting dates, progress, and feedback.
- Students must achieve at least **75% attendance** in supervisory meetings to be eligible for the final submission of the Research Monograph. Those falling short without any valid justification (medical/unforeseen) must defer and resubmit the Research Monograph with the next batch.

4.5 Plagiarism & Integrity

- Research Proposal and the final Research Monograph will be screened for plagiarism.
- A **≤20% similarity index** is required for acceptance.

4.6 Evaluation Committee

- Supervisor will have no role in the evaluation of the Research Monograph.
- Two Examiners will independently evaluate 80% of the weight of the final Research Monograph using the following criteria:

Sl No.	Component	Marks (%)
1.	**Title of Research:** Title is concise, specific, and clearly reflects the research focus.	1
2.	**Research Problem & Rationale:** Clear problem identification, well-defined statement, justified by identifying gaps in existing knowledge.	2
3.	**Research Questions:** Appropriately framed general and specific research questions aligned with the problem and objectives.	2
4.	**Literature Review:** Comprehensive, up-to-date, and critically synthesized literature with a structured review matrix.	6
5.	**Theoretical / Conceptual Framework:** Identification, justification, and application of a suitable theory or conceptual model to guide research design, analysis, and interpretation.	7
6.	**Methodology & Tool Development:** Appropriateness of research approaches, design, and method; quality, validity, and reliability of instruments (survey tools, interview guides, etc.); ethical compliance.	10
7.	**Data Collection & Management:** Quality and adequacy of data collection (qualitative, quantitative, or mixed); adherence to ethical standards; proper data management (transcription, entry, cleaning).	10
8.	**Data Analysis & Interpretation:** Robustness of analysis (statistical rigor for quantitative/coding depth & thematic richness for qualitative/integration for mixed methods); clarity of interpretation; alignment with research questions and theoretical frame.	20
9.	**Report Writing:** Well-structured, coherent, and logically presented report; clarity of argument; effective use of evidence; proper formatting and academic writing style.	15
10.	**Overall Quality of Monograph:** Originality, contribution to knowledge or practice, consistency across sections, and adherence to academic integrity.	5

Sl No.	Component	Marks (%)
11.	**Reference Writing:** Accurate, consistent, and complete use of referencing style (APA/Harvard), both in-text and in the reference list.	2
	Total	80%

- Twenty percent weightage of the marks will be assessed through the oral defense with the four-member examination committee, where the student will be evaluated for their clear presentation of research, ability to defend methodology, framework, and findings; critical reflection; and responsiveness to examiners' questions.

4.7 Monograph Format

- The Research Monograph must be structured following the format below:

4.8 Total Word Limit and Its Distribution

- The undergraduate students will write their capstone Research Monographs in not more than **15,000 words** (excluding references and appendices). This word limit can be distributed in the following way:

Sl. No.	Section	Proportion (%)	Approximate Words
1.	Abstract	Fixed length	250–300
2.	Chapter 1: Introduction	10%	1,000
3.	Chapter 2: Literature Review	20%	2,000
4.	Chapter 3: Theoretical /Conceptual Framework	10%	1,000
5.	Chapter 4: Methodology	15%	1,500
6.	Chapter 5: Results / Findings	20%	2,000
7.	Chapter 6: Discussion	15%	1,500
8.	Chapter 7: Conclusion & Recommendations	5%	500
9.	References	As needed	–
10.	Appendices	As needed	–

4.9 Archiving

- Approved monographs will be archived digitally in the departmental repository.

Course Code: POP 409 Course Title: Written Comprehensive

Credits: 04 **Course Type:** Core

1. Rationale of the Written Comprehensive: The Written Comprehensive Examination serves as a culminating academic requirement for undergraduate students. It is designed to assess the **breadth and depth of knowledge** acquired across the entire program of study, encompassing theoretical foundations, methodological approaches, applied skills, and contemporary issues in population health and development. Unlike individual course assessments that measure specific learning outcomes, the comprehensive exam will evaluate the student's ability to:

- **Integrate knowledge** from multiple courses and disciplinary perspectives.
- **Synthesize concepts and theories** to analyze real-world issues.
- **Demonstrate critical thinking and problem-solving skills** in addressing population and health challenges.
- **Communicate ideas effectively** through structured academic writing.

Through the Written Comprehensive Examination, the program ensures that graduates demonstrate **holistic competence** and are prepared for professional or academic advancement.

2. Course Learning Outcomes (CLOs)

By the end of the Written Comprehensive Examination, students will be able to:

1. **Recall and explain** key concepts, theories, and methods from all core courses of the program. *(Remember / Understand)*
2. **Integrate and synthesize** knowledge across demographic, public health, and social science disciplines to address complex issues. *(Analyze)*
3. **Apply** theoretical and methodological approaches to population and health data in hypothetical or applied scenarios. *(Apply)*
4. **Evaluate** alternative perspectives, policies, and strategies in population and health studies. *(Evaluate)*
5. **Produce** coherent, well-structured written arguments demonstrating mastery of academic writing and critical thinking. *(Create)*

3. Evaluation Criteria (100 Marks, 4 Credits)

The Written Comprehensive Exam will be **4 hours in duration** and will be conducted at the end of the eighth semester.

3.1 Exam Structure

- The exam will consist of **eight broad questions**, each representing the **core learning outcomes** of one semester.
- Questions will be integrative in nature, requiring students to synthesize knowledge from the courses offered in that semester.
- Students will be required to **answer five (5) questions** (depending on departmental policy).

3.2 Marks Distribution

- **Total Marks 100** each question carries **20 marks**.
- Students must attempt at least one question from the **first four semesters** and one question from the **last four semesters** to ensure both foundational and advanced knowledge are assessed.

3.3 Question Design Principles

- Questions will be tested:
    - **Conceptual Understanding** (key theories, concepts, definitions)
    - **Applied Knowledge** (methodological or analytical skills)
    - **Integration & Synthesis** (linking multiple courses, addressing real-world problems)

    - **Critical Thinking** (evaluating policies, programs, or theories)
- Example question types:
    - Essay-type analytical questions
    - Data interpretation/problem-solving questions
    - Policy critique questions

Course Code: POP 410 Course Title: Viva-Voce

Credits: 01 **Course Type:** Core

1. Rationale of the Viva-Voce

The Viva-Voce Examination at the end of every even semester (2, 4, 6, and 8) serves as an **intermediate milestone** in the undergraduate program. It ensures that students have acquired sufficient foundational knowledge in population, health, and development issues and can **articulate, integrate, and apply** this knowledge orally. This assessment develops students' ability to:

- Express and defend ideas clearly in front of an academic panel.
- Demonstrate understanding of the fourth-year coursework (Semesters 7 & 8).
- Connect classroom learning with practical and policy issues.
- Receive constructive feedback early, guiding their future learning trajectory.

2. Course Learning Outcomes (CLOs)

- By the end of the Viva Voce Examination, students will be able to:
- **Recall and explain** key concepts, theories, and methods learned in the seventh and eighth semesters. *(Remember, Understand)*
- **Apply** demographic and public health concepts to simple problem-solving or case scenarios. *(Apply)*
- **Communicate** knowledge orally in a clear, structured, and confident manner. *(Apply)*
- **Reflect** on the relevance of early learning to population, health, and sustainable development issues. *(Evaluate)*

3. Evaluation Committee

- The **Viva Voce will be conducted by a 4-member Examination Committee** appointed by the Department.
- **Questions will be drawn from the courses taught during the fourth year (Semesters 7 & 8).**
- Each examiner may ask questions, and marks will be awarded individually, which will then be averaged.

4. Evaluation Criteria (100 Marks; 1 Credit Equivalent)

Each student will face about **10 minutes of oral questioning** by the examination committee. Students will be assessed on the following criteria:

Sl No.	Component	Description	Marks
1.	Conceptual Understanding	Accuracy in recalling and explaining key concepts, definitions, and theories from Semester 7 and 8 courses.	25%
2.	Application & Problem-Solving	Ability to apply concepts/methods to minor case problems, scenarios, or data excerpts.	25%
3.	Integration & Reflection	Ability to link foundational knowledge to broader population, health, and development issues.	20%
4.	Communication Skills	Clarity, confidence, logical flow, and academic language in oral responses.	20%
5.	Professionalism	Attitude, engagement with examiners, and academic integrity during the exam.	10%

Part D

18. Grading/Evaluation

1) **Grading Scale/Grades:**
The following table will calculate a particular course's grade points and letter Grades.

Marks Range (in percent)	Letter Grade	Explanation	Grade Points
80 and above	A+	Excellent	4.00
75 to less than 80	A		3.75
70 to less than 75	A-		3.50
65 to less than 70	B+	Very Good	3:25
60 to less than 65	B		3.00
55 to less than 60	B-		2.75
50 to less than 55	C+	Good	2.50
45 to less than 50	C		2.25
40 to less than 45	D	Passing	2.00
Below 40	F	Falling	0.0
----------	I	-------	Incomplete
----------	W	-------	Withdrawn

2) **Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA):**
- 'A+', 'A', and 'A—' grades indicate excellent overall performance by a student, earning grade points of 4.0, 3.75, and 3.50, respectively.
- 'B+', 'B', and 'B—' grades indicate a very good overall performance by a student, earning grade points of 3.25, 3.00, and 2.75, respectively.
- 'C+' and 'C' grades indicate 'good' performance overall by a student, earning grade points of 2.50 and 2.25, respectively.
- A 'D' grade is indicative of minimally acceptable passing performance. Overall, a student earns a grade of 2.00.
- 'F' indicates an unacceptable 'failing performance overall by a student, i.e., failure to earn credit points.

3) **Incomplete (I) courses:**
- 'I' grade indicates a situation where a student, for non-academic reasons beyond his control, cannot complete the course's full requirements due to not being able to sit for the semester final examination. With the submission of valid and authenticated evidence of such reason (s), and the recommendation of the course teacher (to be reported to the Chairperson of the Examination Committee), that student shall be allowed to complete the semester final examination with the next batch. Meanwhile, the student concerned will be promoted to the next semester. If an 'Incomplete' grade is not cleared with the next batch, the 'I' grade shall automatically be changed to an 'F' grade. A maximum of two 'I' grades shall be allowed for a student in one semester.

4) **Retake and Grade Improvement:**
Promotion:
- A student must earn a minimum CGPA of 2.00 to be promoted from the first to the second year.
- Students who fail to obtain the required grade points will also be allowed to appear on the Improvement Examination. If they fail to obtain the required marks/grade points in the Improvement Examination, they must seek readmission with the following batch.
- For promotion from the second to the third year, a student shall be required to earn a minimum CGPA of 2.25

- For promotion from the third to the fourth year, a student shall be required to earn a minimum CGPA of 2.50
- To obtain a BSS (Hons) degree, a student must earn a minimum CGPA of 2.25, considering all the grade points earned in a total number of courses, including improved grades, if any.
- A carry-over system should be in place. If a student fails to earn the required CGPA for promotion, she/he shall be allowed to continue in the next semester, but she/he shall clear her/his deficit by sitting for a separate examination within 45 days of the publication of the result with the permission of the Academic Committee of the Department.
- A student failing to clear up the annual university or departmental dues of the year of study shall not be promoted to the next semester.

Improvement

- A student earning an 'F' grade in any course shall be allowed to improve the grade twice/two times only with the following batches.
- A student earning an 'F' grade in any course shall be allowed to improve the grade in the course final examination, including the mid-semester examination, once only with the immediate next batch.
- If a student obtains grades 'B' or less in a course, she/he shall be allowed to improve grades through a Supplementary Examination within 45 days under the same Examination Committee or with the following batch. Students who fail to obtain the required grade points will also be allowed to appear on the Supplementary Examination. If they fail to obtain the required marks/grade points in the Supplementary Examination, they must seek readmission with the following batch.
- Such improvement shall be allowed only once in a course; in such case, the student's previous grade shall be automatically canceled.
- A student carrying a grade 'F' in any course shall not be awarded the degree unless he/she improves it by appearing at the semester final examination with the next batch
- If the student gets an F in the improvement examination, he/she will automatically be dropped from the semester, and he/she will have to take readmission with the next batch, provided the student concerned is eligible for readmission.
- To improve a course grade, the student shall apply to the department Chairperson for at least four (four) weeks before the semester's final examination starts.
- No improvement shall be allowed for the term papers/home assignments, active participation in the discussion class/tutorial class/group presentation/ class test marks, and the grades earned in written and oral comprehensive examinations.

Readmission

- A student failing to get the requisite grade points for promotion from one semester to the next may seek readmission with the following batch and the 1st, 3rd, 5th, or 7th Semester, respectively.
- For readmission, students must attend at least 30% of classes in each course in the preceding session and apply within 15 days after the announcement of the results of the semester concerned.
- On readmission, grades earned earlier by a student in the class of readmission shall cease to exist, and the student must retake all the coursework and examinations.
- Readmission shall be allowed only two times during the entire BSS (Hons) degree. The student must complete the four-year BSS (Hons) degree within six years

5) **Dropout:**

- A student failing to earn the GPA required for promotion from one semester to the next after taking readmission in any semester shall be dropped from the program.
- A student earning F grade in any course after taking improvement examinations or readmission in any semester class shall be dropped out of the program.