Course nu	U-LAS06 20039 LE43											
Course title (and course title in English)	Understa Projecti Understa Projecti	anding l on-E2 anding l on-E2	Demograph Demograph	amics ar amics ar	cs and name, job title, and department of affiliation							
Group Hu	ımanitie	nanities and Social Sciences				Field(Classification)				udence, Politics	and Eco	onomics(Issues)
Language of instruction	sh				group	Group A		Number of credits		redits	2	
Hours	30		Class style Let (F			cture 'ace-to-face course)			Year/semesters		2025 • Intensive, Second semester	
Days and periods 1-3 pe 3-5 pe 1-3 pe 1-3 pe 1-3 pe		ve priod on Feb. 19, riod on Feb. 20, riod on March 4, riod on March 6, riod on March 11		Targe	et year	All students		E	Eligible students		For all majors	

[Overview and purpose of the course]

Objective: To Understand concepts and methods to study changes in population size and structures. And to analyze recent trends in population and develop alternative future scenarios for the future. Background: Understanding population dynamics and heterogeneity in and within a country provides important insights for explaining social and environmental changes. It also helps to identify vulnerable sections of the population that are affected most by these changes. Projections of population dynamics and heterogeneity can serve as a prediction that assists policymakers and other stakeholders in visualizing an alternative future, to assess whatif scenarios, or to simulate sensitivity tests of single or multiple variables. While demographers are interested purely in population dynamics, the users of population projections are spread in many disciplines. Researchers and planners use population analysis and projections in the development sector such as education, health, economic (labor force participation), energy, food, land use, environmental pollution, etc. sectors, etc. Within a country, national and regional statistical offices are mandated to maintain population counts, monitor the dynamics, and produce projections by various demographic and socioeconomic characteristics at the national and sub-national levels. Statistical offices conduct periodic censuses, surveys, and collects data through civil registration and other government sources. However, the quality and frequency of the implementation of such a mandate vary largely between countries. Main issues are related to the quality and coverage of collected data, processing and estimation of indicators, future scenarios and assumptions for the future, and the methodology of projection, etc.

National level and cross-country population dynamics are also maintained and projected at the international level, for e.g., the estimates and projections by age and sex of the United Nations, and by age, sex, and educational attainment of the Wittgenstein Center for Demography and Global Human Capital (IIASA, VID/ ÖAW, WU). These institutes have their methods that are largely consistent between countries and often the best option available to study national level or comparative cross-country analysis. However, for an in-depth study on or within a country, these international efforts lack analytical rigor and are limited by the scope of the geographic unit of analysis. Understanding Demography Dynamics and Projection-E2(2)

[Course objectives]

Participants will gain experience in each of the following concepts, issues, and measurements and will be able independently analyze demographic dynamics and issues in a given population.

[Course schedule and contents)]

Topics:

Lecture 1: Demography: Understanding change in population size and structures. Demographic Balancing equation. Important forces of change. Demographic Dynamics and components of change: Population size and structure, fertility, mortality, and migration. Rates and Probability

Lecture 2: Sources of Population Heterogeneity: Place, age, sex, education, income, race, ethnicity, religion, number of children, etc.

Lecture 3: Age, Cohort, and Period Effect: Lexis Diagram. Period and Cohort measures. Theories: Demographic Transition Theory and Demographic Metabolism Theory

Lecture 4-6: Mortality and Morbidity: Deaths, disease, and disability. Cause of deaths. Longevity and Ageing. Lecture 7-9: Fertility: Births and

parity. The number of children and the birth interval. Important forces of change. Sex Ratio at Birth. Low fertility

Lecture 10: Migration: Mobility, internal and international migration

Lecture 11: Aging: Dependency ratios. Consequences. New measures (last lecture). Demographic dividend. Demographic indicators.

Lecture 12-15: Population Projection

The exact lecture schedule is as follows;

- (1) Feb.19 (Wed) 3 class in the afternoon (13:00-18:00)
- (2) Feb.20 (Thu) 3 class in the morning (8:45-14:30)
- (3) March.4 (Wed) 3 class in the nbspafternoon (13:00-18:00)
- (4) March.6 (Fri) 3 class in the morning (8:45-14:30)
- (5) March.11 (Wed) 3 class in the morning (8:45-14:30)

[Course requirements]

Lectures with computing facility

[Evaluation methods and policy]

Final assignment consisting of a report (1500-2000 words) and excel-VBA files with calculations steps. (30 points)

Evaluation will be based on class assignments (Four times, 5 points each = 20points), and an examination (50 points).

[Textbooks]

Samuel Preston ^PDemography (Wiley, 2000) ISBN:1557864519, 9781557864512 (Patrick Heuveline, Michel Guillot)

[References, etc.]

(References, etc.)

Introduced during class

[Study outside of class (preparation and review)]

Basic knowledge in mathematics and Excel

Continue to Understanding Demography Dynamics and Projection-E2(3)

Understanding Demography Dynamics and Projection-E2(3)

[Other information (office hours, etc.)]

Students are required to submit reports in advance. The report must include the following:

1. Self-introduction (name, country of origin, current department)

2. Area of interest, motivation to apply

3. Expectations for this lecture and self aspirations

The report is about A4 (about 70-100 words), and the format is arbitrary.

The deadline for submission will be by 5 p.m. on February 12, 2020, and will be submitted to the Liberal Arts and General Education Courses Student Desk.

[Essential courses]