

AR-507

Urban demography

Lerch Mathias

Cursus	Sem.	Type
Architecture	MA2, MA4	Opt.
Territories in transformation and climate minor	E	Opt.
Urban Planning and Territorial Development minor	E	Opt.

Language of teaching	English
Credits	3
Session	Summer
Semester	Spring
Exam	During the semester
Workload	90h
Weeks	12
Hours	2 weekly
Lecture	2 weekly
Number of positions	

Summary

This course introduces theoretical developments and empirical evidence on city population change worldwide, as well as on its interactions with sustainable development.

Content

Alongside fast socioeconomic and technological developments, the human population has grown significantly since 1980, from 4.4 to 8 billion in 2022, and its structure or composition has changed, thereby increasing its ecological footprint. The world population got older, better educated, and more than half is concentrated in cities since 2015. This course focuses on the human actors of the resulting change in the built and natural environments. It introduces aspects of population change in cities that are relevant to architects, urban planners, civil and environmental engineers, as well as social scientists.

Students will learn how to identify and draw sociodemographic profiles of urban populations to better serve them. The course puts the people at the heart of the urbanisation process: for how many, where and for whom to build housing and infrastructure and provide public services? Adopting a multiscale spatial perspective, the course offers an overview of theoretical developments and empirical evidence on the demographic dimensions of city growth, the transformation of city hierarchies, the processes of urban concentration, sprawl and re-urbanisation, and urban exclusion (segregation/slums). Various questions will be addressed, such as: Why is the majority of future world population growth expected to be concentrated in low- and middle-income countries' cities, despite low levels of fertility? Will cities in high-income countries be at the forefront of the expected world demographic decline? How do people respond in terms of their demographic behavior to the changes in human and development and the environment in cities, and how does population urbanization in turn shape trajectories of sustainable development? The aim is to introduce students to the quantitative data used to characterize city populations and identify human risks and societal capacities of adaptation with respect to changes in the built and natural environments. Opportunities to explore these data are offered in the form of applied research during lab sessions.

List of content:

Overview of the international trends in urbanisation and population growth in urban areas

Evaluation of theoretical models and the societal determinants of the components of demographic change (mortality, fertility and migration) in cities

Examination of the inequalities in population numbers, trends and socioeconomic composition between and within cities

Discussion of the interactions between population urbanisation, human development and environmental change

Introduction to data sources used to define urban areas and measure changes in population numbers and composition

Keywords

Urbanisation - Change and sociodemographic composition of city populations - Urban mortality, fertility and migration - Urban diversity - City hierarchy - Human development and Environmental change

Learning Outcomes

By the end of the course, the student must be able to:

- Synthesize demographic concepts of urbanization and urban growth
- Analyze how urban populations change, and quantitatively measure those changes
- Compare international trends in urban demography
- List the socioeconomic determinants of change in mortality, fertility and migration in urban areas
- Describe the channels through which urban population growth, human development and environmental change are related to each and another in a system
- Assess / Evaluate the urbanisation-development interlinkages in two countries of interest

Teaching methods

Lectures, lab sessions, interaction among students

Expected student activities

Weekly compulsory reading

Active participation in the course

Participation in lab sessions

Writing (and oral presentation) of a short research report

Assessment methods

Active participation in class (reading list)

Completion of the lab-session assignments, ## 10% of grade

Oral presentation in class of a quantitative analysis of demographic changes in cities and their interactions with sustainable development in one or two chosen countries (building on the lab-assignments), 30% of grade

Writing of a report of the quantitative analysis presented in class (3000 to 4500 words if single-authorship, 5000 to 8000 words if dual authorship) #, 60% of grade

Supervision

Office hours Yes

Assistants Yes

Resources

Moodle Link

- <https://go.epfl.ch/AR-507>