UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Policies for Smart Cities

2526-2-FDS01Q038-FDS01Q039M

Aims

Knowledge and Understanding
Students acquire an in-depth understanding of the processes and actors—along with their respective interests—that characterise a smart city, with particular attention to the inequalities that may arise and the role of public policies. Students also gain knowledge of the typical issues facing highly urbanised environments, as well as of the methodologies used to formalise and analyse such issues. The course encourages a critical reflection on the concept of the smart city and on the types of data required to understand it. The theoretical component is complemented by national and international case studies on smart cities.

Applying Knowledge and Understanding
Students are required to develop a group project focused on the theme of the smart city and to formulate policy or intervention proposals based on the selected topic. These projects involve the collection and analysis of data. The course fosters the ability to work with multiple existing datasets, triangulate information, and imagine innovative solutions applicable to real-world contexts.

Judgement and Critical Thinking
Through the analysis of complex cases and critical reflection on the role of data scientists themselves, students are encouraged to develop well-reasoned critical judgements and propose substantiated solutions, evaluating both advantages and limitations. Classroom discussions, lecturer feedback on projects, and simulation activities support the development of independent evaluative skills.

Communication Skills
Students are expected to present their group projects orally to peers and lecturers, thereby developing clear, concise, and effective communication skills. Active participation and constructive debate are encouraged during interactive lectures and case discussions.

Learning Skills
The course includes self-directed activities such as individual reading, case study analysis, and the development of a project.

Contents

- The dimensions that characterize the smart city.
- The actors who are creating and implementing the smart city
- The governance of the smart city
- Who benefits and who is excluded?
- The role of data analysts in this area

Detailed program

Street level bureaucrats and data analysts in the smart city
Who are the actors making the smart city? The street level bureaucracy and the role of data analysts

Smart city and platform city
What differences between the smart city and the platform city? Actors, indicators, policies, and what outcomes. Who are the excluded ones?

Smart city and urban governance
Modes of regulation (market exchange, redistribution, reciprocity), participation and smart city. Taking into account citizens' activation and social capital.

The smart 15 minutes city
What is the 15 minutes city? What's for? How the smart can support the 15 city and with what benefits, for whom? To do what? What services do we need to reach in 15 minutes? Are smart cities more unequal/equal than other in terms of income?

How to construct a good case-study
Working with data, the effect of short-term tourism and Airbnb in touristic places.

Working with data: Smart city and inequalities
Conclusion of the module

Prerequisites

None

Teaching form

23 hours conducted in in-person delivery mode

Textbook and teaching resource

Slides and notes provided by lecturers

Semester

Second semester

Assessment method

The course will be evaluated through an essay and an oral presentation on a self-selected smart city topic. The essay will be valid for both the Policies for Smart Cities module and the Smart Mobility module. Students, in groups of two, will write an essay in English (or Italian), covering problem description, data analytics, visualization, and policy recommendations. The essay should address relevant indicators, data selection, cleaning, spatial and temporal analysis, and prediction or classification models if needed. Ethical and social implications should also be considered. An oral presentation of the essay is required. Evaluation criteria include clarity and coherence of problem description, quality and relevance of data, accuracy and validity of analysis and visualization, robustness and reliability of models, effectiveness of policy suggestions, consideration of ethical and social implications, overall essay quality, quality of the in-person presentation. No intermediate assessment is forseen. The final grade is given by considering all previous dimensions.

Office hours

Received by appointment to be arranged by e-mail

Sustainable Development Goals

GENDER EQUALITY | INDUSTRY, INNOVATION AND INFRASTRUCTURE | REDUCED INEQUALITIES | SUSTAINABLE CITIES AND COMMUNITIES