UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Indicatori e Analisi per lo Sviluppo Umano e la Sicurezza

2627-2-F8805N009

Learning objectives

The course aims to provide students with theoretical, methodological, and practical tools for analyzing processes of human development, risk, and safety through the critical use of social indicators.
The course is based on the idea that risk and security are not exclusively objective phenomena or ones that can be measured neutrally, but are also social, cultural, institutional, and political constructs. From this perspective, indicators are not merely descriptive tools: they help define public issues, guide decisions, classify populations and territories, and make forms of vulnerability and inequality visible or invisible.
The course therefore focuses on the relationship between risk, vulnerability, exposure, capacity, resilience, inequalities, institutions, and public policies, with particular attention to human security, urban security, workplace safety, environmental risks, and emergency governance.
By the end of the course, students will be able to:
· understand the main sociological and methodological concepts related to risk, security, human development, vulnerability, exposure, capacity, and resilience;
· distinguish between context indicators, leading indicators, process indicators, and outcome indicators;
· construct, select, and interpret simple and composite indicators;
· critically analyze statistical sources, administrative data, surveys, geographic data, open data, and institutional reports;
· assess the limitations, biases, ethical implications, and potential stigmatizing uses of indicators;
· develop a system of indicators applied to a specific case;
· communicate results through risk profiles, summary sheets, and policy briefs.

Contents

The course deals with the use of social indicators for the analysis of human development and security, with a particular focus on risk prevention, social vulnerability, quality of life, and the responsiveness of institutions and communities.
The course will discuss key concepts such as risk, hazard, threat, exposure, vulnerability, capacity, resilience,

harm, critical event, risk perception, and institutional trust.
A significant portion of the course will be devoted to the design of valid, reliable, comparable, and usable indicators in the contexts of social research, evaluation, and public policy. Indicators related to human development, well-being, inequalities, urban safety, workplace safety, social vulnerability, environmental emergencies, and risk communication will be analyzed.

Detailed program

1. Risk, Security, and Human Development
   The first part of the course introduces the fundamental concepts of risk, security, and human development. Topics covered will include risk as a social construct, the distinction between objective risk and perceived risk, the relationship between risk and modernity, the role of culture in the perception of danger, the difference between safety and security, and the concept of human security.
   Particular attention will be given to the link between risk, social inequalities, vulnerability, trust in institutions, and collective response capacity.
2. Social Indicators, Concepts, and Measurement
   The second part is dedicated to the construction of indicators. The steps leading from concept to indicator will be analyzed: conceptualization, identification of dimensions, selection of variables, construction of simple and composite indicators, definition of thresholds, classifications, and rankings.
   The main quality criteria for indicators will be discussed: validity, reliability, sensitivity, comparability, timeliness, transparency, and usability. The risks associated with the misuse of indicators will also be analyzed, particularly when they lead to oversimplifications, stigmatizing geographic classifications, or governance effects on the populations under observation.
3. Types of Indicators
   A specific section of the course will be dedicated to distinguishing between different families of indicators:
   · context indicators, which describe the social, economic, demographic, territorial, and institutional conditions within which a phenomenon occurs;
   · early warning indicators, which signal conditions of risk or vulnerability before critical events occur;
   · process indicators, which measure how interventions, services, procedures, or policies are implemented;
   · outcome indicators, which measure final effects, results, or events that have already occurred.
   This distinction will be applied to various fields: urban safety, labor, the environment, local welfare, and emergencies.
4. Data Sources and Information Systems
   The third part of the course focuses on data sources. Official statistics, administrative data, surveys, georeferenced data, open data, institutional reports, and digital sources will be examined.
   The main Italian and European sources useful for the study of human development and safety will be analyzed: Istat, BES, INAIL, ISPRA, Eurostat, Eurofound, EU-OSHA, local governments, urban safety plans, civil protection plans, social plans, and regional planning documents.
5. Areas of Application
   The fourth part addresses several specific areas of application:
   Workplace Safety
   Indicators related to workplace accidents, occupational diseases, work-related stress, violence and harassment, the safety climate, training, prevention, and work organization will be analyzed.
   Urban and Territorial Safety
   Indicators of recorded crime, victimization, perceived insecurity, urban decay, access to services, neighborhood vulnerability, social cohesion, social capital, and institutional trust will be discussed.
   Environmental Risks and Emergencies
   Indicators related to extreme events, territorial exposure, social vulnerability, preparedness, institutional capacity, risk communication, and community resilience will be analyzed.
   Human Development, Well-being, and Inequalities
   Indicators of quality of life, health, education, employment, participation, inequalities, sustainability, and access to opportunities will be examined.

6. Governance, Risk Assessment, and Risk Communication
   The final part of the course will be dedicated to the relationship between indicators, public decision-making, and communication. Students will be guided in developing a system of indicators applied to a concrete case and in drafting a brief policy brief.
   The final project will allow students to connect theory, methodology, data, and operational decisions.

Prerequisites

There are no specific prerequisites. A basic understanding of social research methodology is helpful.

Teaching methods

The course consists of 56 hours, of which approximately 50% will be dedicated to lecture-based instruction (lectures using slides, audio, and video) and 50% to interactive instruction (exercises, small-group work, and the presentation of case studies that will serve as the basis for individual and small-group assignments, which will be prepared and discussed during the course).

For working students and those who are unable to attend in-person classes, dedicated sessions will be held to summarize the course's key topics.

Assessment methods

Learning outcomes will be assessed through an oral exam and/or the presentation and discussion of a practical project.
The project may consist of developing a system of indicators related to a specific case, accompanied by a brief methodological discussion and a final policy brief.

Textbooks and Reading Materials

Papers and book chapters

Becker, H. S. (2018). I problemi sociali (C. Rinaldi, A cura di). PM edizioni.
Cutter, S. L., Boruff, B. J., & Shirley, W. L. (2003). Social vulnerability to environmental hazards. Social Science Quarterly, 84(2), 242–261. https://doi.org/10.1111/1540-6237.8402002
Desrosières, A. (2011). Buono o cattivo? Il ruolo del numero nel governo della città neoliberale. Rassegna Italiana di Sociologia, 52(3), 373–398. https://doi.org/10.1423/35257
Douglas, M. (1996). Rischio e colpa. Il Mulino. Cap. 1-2-3
Espeland, W. N., & Stevens, M. L. (2008). A sociology of quantification. European Journal of Sociology, 49(3), 401–436. https://doi.org/10.1017/S0003975609000150
Kasperson, R. E., Renn, O., Slovic, P., Brown, H. S., Emel, J., Goble, R., Kasperson, J. X., & Ratick, S. (1988). The social amplification of risk: A conceptual framework. Risk Analysis, 8(2), 177–187.
Nussbaum, M. C. (2014). Creare capacità. Liberarsi dalla dittatura del PIL. Il Mulino. Cap. 1-2-3-8
Parra Saiani P., Gli indicatori sociali, FrancoAngeli, 2008.Cap. 2-4-5-6-7-8

Sen, A. (2020). Lo sviluppo è libertà. Mondadori. Cap. 1-2-3
Slovic, P. (1987). Perception of risk. Science, 236–285. https://doi.org/10.1126/science.3563507
Sturloni, G. (2018). La comunicazione del rischio per la salute e per l'ambiente. Mondadori Università. Prima parte: cap. 1-2. Seconda parte: cap. 1. Terza parte: cap. 2

Report

Safety and victimization

ISTAT. (2024). La percezione della sicurezza: Anni 2022/2023. https://www.istat.it/comunicato-stampa/percezione-della-sicurezza-anni-2022-2023/
ISTAT. (2025). Reati contro la persona e contro la proprietà: Vittime ed eventi, 2022/2023. https://www.istat.it/comunicato-stampa/reati-contro-la-persona-e-contro-la-proprieta-vittime-ed-eventi-2022-2023/
ISTAT. (2024). Rapporto BES 2023: Il benessere equo e sostenibile in Italia [Dominio 7: Sicurezza]. https://www.istat.it/produzione-editoriale/rapporto-bes-2023-il-benessere-equo-e-sostenibile-in-italia/
ISTAT. (2025). Rapporto BES 2024: Il benessere equo e sostenibile in Italia [Dominio 7: Sicurezza]. https://www.istat.it/produzione-editoriale/rapporto-bes-2024-il-benessere-equo-e-sostenibile-in-italia/
United Nations Development Programme. (1994). Human development report 1994: New dimensions of human security. Oxford University Press. https://hdr.undp.org/content/human-development-report-1994
United Nations Development Programme (UNDP). (2022). New threats to human security in the Anthropocene: Demanding greater solidarity. United Nations Development Programme. https://doi.org/10.13025/19798

Environment, risk, territory and climate change

ISPRA. (2025). Stato dell'ambiente in Italia 2025: Indicatori e analisi. https://www.isprambiente.gov.it/it/pubblicazioni/stato-dellambiente/stato-dellambiente-in-italia-2025
ISPRA. (2025). Dissesto idrogeologico in Italia: Pericolosità e indicatori di rischio. Edizione 2024 (Rapporti 415/2025). https://www.isprambiente.gov.it/it/pubblicazioni/rapporti/dissesto-idrogeologico-in-italia-pericolosita-e-indicatori-di-rischio-edizione-2024
SNPA. (2025). Consumo di suolo, dinamiche territoriali e servizi ecosistemici: Edizione 2025. https://www.isprambiente.gov.it/it/attivita/suolo-e-territorio/suolo/il-consumo-di-suolo/il-rapporto-snpa-201cconsumo-di-suolo-dinamiche-territoriali-e-servizi-ecosistemici201d

Quality of life, inequalities, work and territory

Eurofound. (n.d.). European Working Conditions Survey 2024 [Database online]. https://www.eurofound.europa.eu/en/publications/series/european-working-conditions-surveys
Eurofound. (n.d.). Psychosocial risks to workers' well-being [Risorsa online]. https://osha.europa.eu/en/themes/psychosocial-risks-and-mental-health
EU-OSHA. (n.d.). OSH Pulse 2025 [Database online]. https://osha.europa.eu/en/facts-and-figures/osh-pulse/climate-digital-change
Eurostat. (2025). Key figures on European living conditions: 2025 edition. Publications Office of the European Union. https://ec.europa.eu/eurostat/en/web/products-key-figures/w/ks-01-25-032
Eurostat. (2025). Eurostat regional yearbook: 2025 edition. Publications Office of the European Union. https://ec.europa.eu/eurostat/web/products-flagship-publications/w/ks-01-25-037
Eurostat. (n.d.). Quality of life [Database online]. https://ec.europa.eu/eurostat/web/quality-of-life
Eurostat. (n.d.). EU-SILC: Income and living conditions [Database online]. https://ec.europa.eu/eurostat/web/income-and-living-conditions/overview
European Agency for Safety and Health at Work. (2025). First findings of the Fourth European Survey of Enterprises on New and Emerging Risks (ESENER 2024). European Agency for Safety and Health at Work. PDF ufficiale EU-OSHA
INAIL. (2025). Relazione annuale 2024. https://www.inail.it/portale/it/inail-comunica/pubblicazioni/rapporti-e-relazioni-inail.html
ISTAT. (2024). Il benessere equo e sostenibile dei territori (BES): Report città metropolitane 2024.https://www.istat.it/comunicato-stampa/il-benessere-equo-e-sostenibile-dei-territori-report-citta-metropolitane-2024/
Ministero dell'Economia e delle Finanze. (2025). Relazione sugli indicatori di Benessere Equo e Sostenibile 2025

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | REDUCED INEQUALITIES | SUSTAINABLE CITIES AND COMMUNITIES