

Savitribai Phule Pune University
Second Year of Computer Engineering (2015 Course)
210250: Audit Course 1
AC1-IV: Smart Cities

We breathe in a world defined by urbanization and digital ubiquity, where mobile broadband connections outnumber fixed ones, machines dominate a new "internet of things," and more people live in cities than in the countryside. This course enables us to take a broad historical look at the forces that have shaped the planning and design of cities and information technologies from the rise of the great industrial cities of the nineteenth century to the present. This course considers the motivations, aspirations, and shortcomings of them all while offering a new civics to guide our efforts as we build the future together, one click at a time.

Course Objectives:

- To identify urban problems
- To study Effective and feasible ways to coordinate urban technologies.
- To study models and methods for effective implementation of Smart Cities.
- To study new technologies for Communication and Dissemination.
- To study new forms of Urban Governance and Organization.

Course Outcomes:

On completion of the course, learner will be able to–

- Better understanding of the dynamic behavior of the urban system by going beyond the physical appearance and by focusing on representations, properties and impact factors
- Exploration of the city as the most complex human-made organism with a metabolism that can be modeled in terms of stocks and flows
- Knowledge about data-informed approaches for the development of the future city, based on crowd sourcing and sensing
- Knowledge about the latest research results in for the development and management of future cities
- Understanding how citizens can benefit from data-informed design to develop smart and responsive cities

Course Contents:

Urbanization and Ubiquity - The slow emergence of learning cities in an urbanizing world
 Cities as collective learners, what do we know?- Framing a view -A gamut of learning types -
 Secrets of knowing and accelerating change - Why some cities learn and others do not.

References:

1. Anthony M. Townsend, W. W. Norton & Company –Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia”, ISBN: 0393082873, 9780393082876.
2. Tim Campbell, Routledge –Beyond Smart Cities: How Cities Network, Learn and Innovate”, Routledge, ISBN: 9781849714266.
3. Stan Geertman, Joseph Ferreira, Jr. Robert Goodspeed, John Stillwell, –Planning Support System ms and Smart Cities”, Lecture notes in Geo information and Cartography, Springer.