Course program and reading list
Semester 2 Year 2022

School: School of Sustainability Founded by Israel Corp. ICL

Advanced Urban Analytics and Smart Cities

Lecturer:
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Teaching Assistant:
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<th>Course No.</th>
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<td>3648</td>
<td>Lecture</td>
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Course Requirements: Final Paper
Group Code: 221364800
Language: English

Course Description

Urbanization trends at the beginning of the 21st century have led humanity to an "urban revolution". For the first time, most of the world's population lives in cities – whether in metropolitan areas, mega-cities with millions of inhabitants, or small cities undertaking rapid expansion. The rush to cities creates new dilemmas: building suitable housing, dealing with aging infrastructure, deciding on the proper role of the private and public sectors in dealing with these issues. Accordingly City leaders have a major role in shaping our future quality of life and are expected to have more impact on individuals than we have seen in recent history.

Advanced Data Analytics and Smart Cities takes a unique approach towards the world of urban management looking beyond the traditional urban planning realm in an attempt to redefine the way we analyze cities. The course uses a multidisciplinary mix of academic
areas including: social studies, policy, big data analytics and urban planning in order to get a unique perspective of the city at a resident level. Traditional infrastructure is no longer the key to city management, but rather cities need to be customized for people - Human Infrastructure is the key to new cities.

**FOUR MODULES of learning have been created to take students through a journey:**

1. MODULE ONE, debating and discussing the key urban challenges: mobility, health, education and employment.
2. MODULE TWO uses advanced sociology to re-visit these challenges with the assumption that today residents are looking for a more customized approach and accordingly urban challenges need to be personalized for each resident.
3. MODULE THREE leverages data analytics tools to examine unique resident groups and needs.
4. MODULE FOUR focused on the policy implications and frameworks required to better re-define city management.

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### Course Goals

The objectives of the course are to provide students with knowledge and tools for the examination of complexities and challenges of 21st century cities in both the developed and developing world. This done with a critical examination of the components, tools and characteristics of smart cities, as presented and implemented in full or in part by local authorities around the world.

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### Grading

- Lectures and discussions on smart cities, theory and implementation (attendance) 10%
- Midterm Report 30%
- Final Project and Project Presentations 60%

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### Teaching Assistant

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### Additional Notes

Requirements:
- Reading the written material and being prepared to discuss the concepts.
  Participation and presence in lectures.
- Submitting and presenting projects.
- Minimum attendance in class 80%.

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**Reading List**

- Goldsmith Stephen & Crawford Susan (2013): The Responsive City: Engaging Communities Through Data-Smart Governance, John Wiley Gooch, Daniel; et al. (2015)."Reimagining the Role of Citizens in Smart City Projects".
- Klein Gabe: Start-Up City: Inspiring Private and Public Entrepreneurship, Getting Projects (Done, and Having Fun (Island Press, 2015