



UPM International Summer School

Future cities and technologies



ETSAM, 17, 18 & 19 July 2018

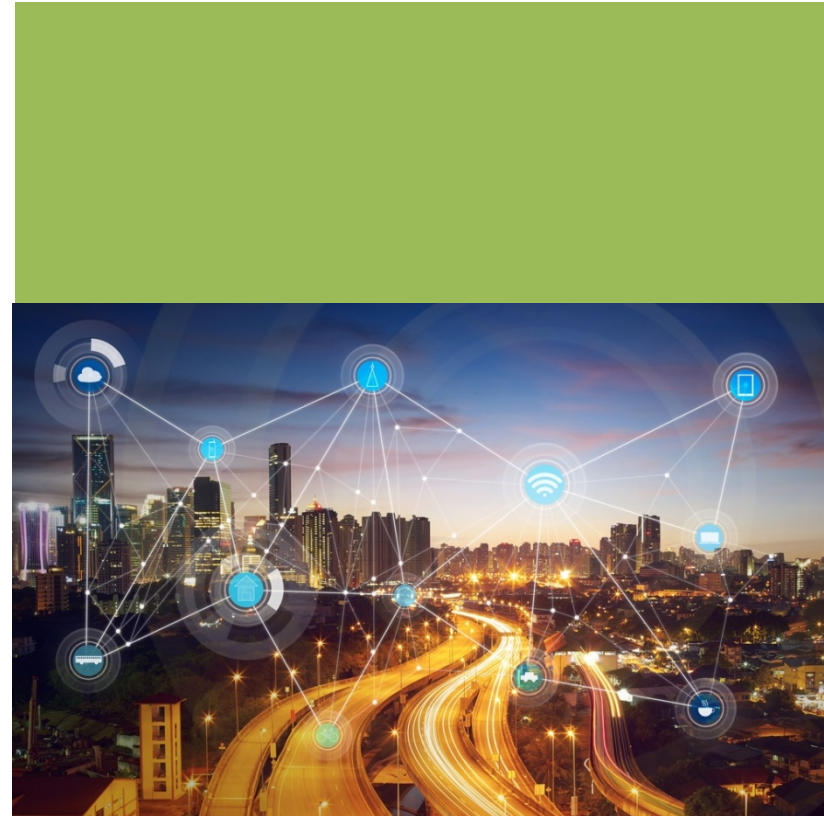
Directors: José-Miguel Fernández Güell & Victoria Fernández Añez

The purpose of this course is to explore the opportunities that information and communication technologies (ICTs) offer to approach challenges faced by contemporary cities. Students will use conceptual models to visualize urban complexity and foresight tools to assess future impacts of ICTs on cities.

Students: Bachelor

Pre-requisites: None

ECTS: 1 (10 class hours)





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Syllabus

MODULE 1: I. Introduction to cities and technologies

Characteristics of contemporary cities: complexity, diversity, uncertainty and intelligence; Challenges of contemporary cities: ageing ; Towards a friendlier systemic approach to urban complexity; Brief historical review of urban technologies ; Emerging urban technologies in the 21st Century

II. Analysis of urban change factors

Conceptual introduction to environmental scan; Identification of societal, economic, technological, environmental and political change factors that may affect contemporary cities; Assessment of change factors (impact-uncertainty matrix); Discussion of key uncertainties for contemporary cities

MODULE 2: I. 2030 vision for cities

Introduction to scenarios design; Building four scenarios for cities in 2030; Display of scenarios; Spatial implications of future scenarios

II. Technological solutions for future cities

Presentation of technological solutions being developed in the social, economic, environmental, planning and governance fields; Assessment of sectoral solutions; Critical review of smart initiatives; Towards more integrated smart initiatives

MODULE 3: TBD

TBD, TBD

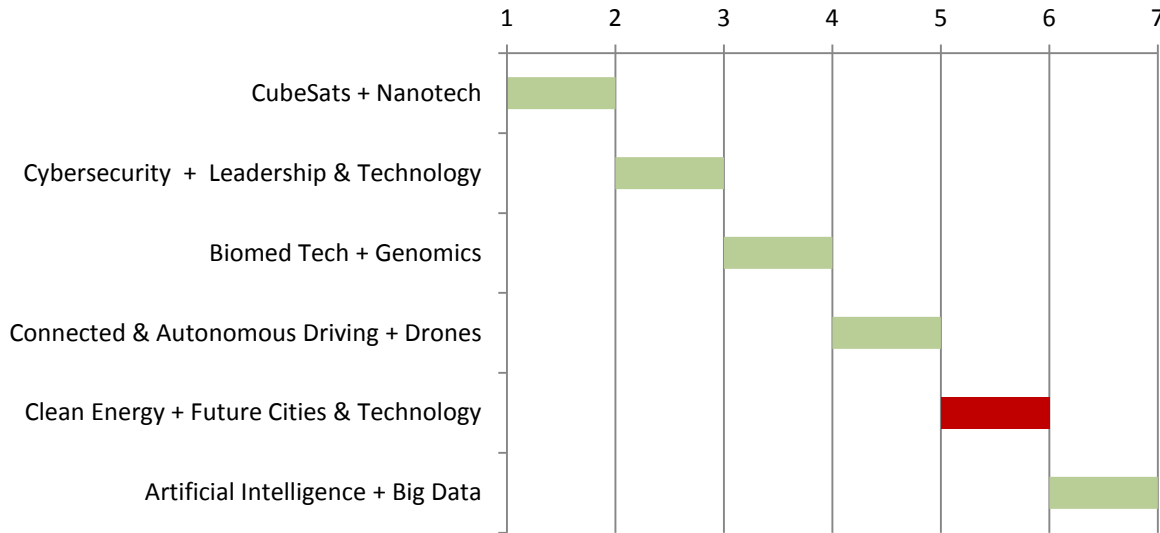




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Schedule



Week	Monday	Tuesday	Wednesday	Thursday	Friday
5			Lecture Discussion	Presentation Review	Industry talk



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Faculty



José-Miguel Fernández-Güell is an architect and urban planner from UPM. He holds an MSc and PhD in Urban and Regional Planning from Texas A&M University. He has worked as a consultant for the Inter American Development Bank, the European Commission and the United Nations Industrial Development Organization. He is currently Director of the Urban and Regional Planning Department at UPM. His areas of research interest are strategic planning, foresight studies, urban governance and smart cities.



Victoria Fernández Áñez is an architect and urban Planner from UPM. She holds an MSc and PhD in Urban and Regional Planning from UPM. Her areas of research interest are Sustainability and Smart and Digital Cities. She has developed her research work at different institutions, including TU Wien, Politecnico di Milano and Universitat Politècnica de Catalunya. She has taught courses as part of bachelor and master degree programmes.