



SPRING SEMESTER (M1.2/14.8)

SUSTAINABLE BUILDINGS AND CITIES

GRAND PARIS SUD CAMPUS

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Partners

Partner companies who deliver lectures/conferences or mentor case studies.

Ballestrero / Bouygues construction / Colas / MC2i / RATP / Semardel / TPA / Transdev / Sauter / TUHH / Bio building concept / Schneider electric / Siliceo / Circolab / Agglomération Grand Paris Sud / ENEDIS / Scoping / BrieNov

OBJECTIVES

- To gain insight into the main features of buildings and cities
- To learn about ways to guarantee a high level of sustainability in urban and construction projects

PROGRAM

Lectures / Practicals / Visits

Conference series held by industry partner representatives:

- General Culture: basic knowledge of buildings, cities, professions and notions of sustainability
- Sustainable buildings: bioclimatic conception and energy efficiency, sustainable design, digital building technology
- Sustainable cities: ecoDistrict (transport management, waste management, smart-grid), management of a large urban project, design and planning of a sustainable urban policy

Typical Project(s)

- Improvement of an existing building's energy efficiency (ex. thermal isolation in Africa)
- Commercial proposals for equipment packs for connected houses
- Study and improvement of a bus line flow (ex. mobility solutions for rural areas)
- Creation of an application to reuse waste (ex. demolition materials, non-potable water)

Competencies

- Technical skills: materials, diagnostics/measurements, energy efficiency, building management system (BMS), food supply management, waste management, transport management
- Regulatory knowledge: thermal regulations, HEQ Buildings, Labels
- Interdisciplinary skills: energy management consulting, end-to-end project management

Prerequisites

- Bachelor's level energy concepts

Note that as lectures and case studies for industrial partners are mostly conducted in French, having a good level of French is recommended.

Assessment

- Video summary of visits and course learnings
- State of the art
- Simulation project on eco-town planning
- Project oral and written presentation