



SPRING SEMESTER (M1.2/14.8)

# CONSTRUCTION & PUBLIC WORKS

TOULOUSE CAMPUS

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## OBJECTIVES

Discover Construction & Public Works-specific concepts in the following domains:

- Smart & Sustainable buildings
- Public Works

## PROGRAM

### Lectures/Conferences

Conference series held by industry partner representatives:

- Terminology, methodology, technology
- Industry insights: experiences, problem situations

### Case Studies

- Smart and passive buildings: thermal study of a building, material choices, energy sources and building control domotics
- VRD (infrastructure development) draft: create a construction/infrastructure draft, understanding plans and layouts, floor space, cubic measurements, rules for road construction and network laying, choice of equipment and implementation yields, costing and phasing

### Typical Major Project(s)

- Conduct a construction project for an industry partner
- Propose an innovative solution for a building company

### Competencies

- Problem statement and analysis, familiarization to domain- specific technical vocabulary and industry business rules

### Prerequisites

- Bachelor's Level - thermal and electronic 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

- Regular progress reports and consultation
- Technical report
- Project oral and written presentation

### Partners

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

**Eurovia / Vinci construction / spie batignolles / Jean lefebvre / Technal / Colas**



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### Assessment

- Quizzes
- Regular progress reports and consultation
  - Technical reports
- Project oral and written presentation

### Partners

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

**Nantes métropole / SNCF / Nantes métropole habitat / Consult'ec / Euromede / Serru / Demathieu bard / Colas**

## OBJECTIVES

- Understand the construction of houses, commercial and industrial infrastructure, bridges or roads
- Assist clients and their suppliers in carrying out their projects

## TARGET PROFESSIONS

- General foreman/site supervisor, account manager, R&D, construction consulting, methods engineer

## PROGRAM

### Lectures/Conferences

Conference series held by industry partner representatives:

- Buildings (housing and industrial), timber construction, building information modeling (BIM), building thermodynamics, building regulations
- Industry insight: experiences, problem situations, projects
- Project/construction site visits

### Technical and financial management

- Technical and financial management of several customer portfolios

### Procurement & budgeting

- Choosing suppliers and subcontractors
- Project budgeting
- Issue invoices, project scheduling and cost management

### Roads (Colas-Eurovia)

- Construction materials, road technology-materials, manufacturing and implementation, pavement sizing

### Non-destructive testing (Ifstar)

- Context and methods, mechanical methods

### Concrete building materials (Vinci)

- Price study

### Typical project(s)

- Carry out a study of a rehabilitation project
- 3D printing

### Competencies

- Design and sizing of structures (architecture, structure, thermal, electrical)
- Price study and costing
- Site management
- BIM management

### Prerequisites

- Bachelor's level - thermal and electronic concepts  
*Note that as lectures and case studies for industrial partners are mostly conducted in French, having a good level of French is recommended.*