



SPRING SEMESTER (M1.2 / I4.8)

AUTOMOTIVE & RAILWAY TRANSPORTATION

LILLE CAMPUS

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Partners

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

TPA / SNCF réseau / Ikos innovation & technologies / Alstom / Stellantis / Ilevia / Transalley

OBJECTIVES

- Acquire knowledge in automotives & railways
- Design solutions to automotive and railway-related problems

TARGET PROFESSIONS

- Automotive quality, methods, R&D engineer
- Railway quality, methods, R&D engineer

PROGRAM

Lectures/Conferences

Mainly held by industry partner representatives:

- Understanding, methodologies, approaches of engineer's work in automotive and railway domains
- Industry insights: experiences, problem situations
- Company visits

Automotive industry

- Design, new energies and environment, intelligent connected transport, vehicle lightening and eco mobility

Railway sector

- System design-operation-maintenance of guided transport

Practical & case studies

- Use of electric motors in the railway industry
- Realization of a thermal engine on a reduced scale with a 3D printer

Typical project(s)

- Mainly with industrial customers (PSA, Valeo, TSO...)

Competencies

- Acquire competencies in automotive and railway domains, problems, solutions
- Diversity of engineering professions in these domains
- Research awareness
- Carry out a scientific approach to understand and meet customer needs

Prerequisites

- Bachelor's level - energy, electrical, fluid mechanics, mechanics and thermal 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

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