



SPRING SEMESTER (M1.2/I4.8)

COMPOSITE MATERIAL STRUCTURES

NANTES CAMPUS

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Partners

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

PSA / Airbus / Low tech lab / Beneteau / Black pepper

OBJECTIVES

- Acquire the knowledge and methodologies in the promising field of composites
- Understand and apply composite manufacturing processes: size and design composite parts; make one more composite parts
- Acquire and develop industrial contacts in the sector

PROGRAM

Lectures/Conferences

Conferences series held by industry partner representatives:

- Industry insights: experiences, problem situations projects
- Understanding terminologies, methodologies, approaches and technologies

Practical & case studies

- Processes, characterization, simulation

Typical project(s)

- Real-life projects and problem-situations with industry partners bibliography, sizing and design, modeling and characterization
- Barkasse: design and implementation of a windmill and low-tech tidal turbine
- Eco-surfboard: state of the art survey of carbon-free surfboards, production and characterization
- Airbus: study of materials, dimensioning new thermoplastics material. Research on new sustainable materials.

Competencies

- Characterization, sizing, dimensioning and implementation/prototyping

Prerequisites

- Bachelor's level - materials and mechanics concept
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
- State of the art, practicals and case study review
- Project oral and written presentation