

# DPT GENIE INDUSTRIEL INDUSTRIAL ENGINEERING

INSA Campus LyonTech - 19 Avenue Jean Capelle Batiment Jules Verne - 69621 VILLEURBANNE Phone 0472438594

# Outils & Méthodes

Introduction to Scientific Research

### **IDENTIFICATION**

CODE: GI-5-S1-EC-INF ECTS: 2.0

### **HOURS**

Lectures: 6.0 h
Seminars: 16.0 h
Laboratory: 0.0 h
Project: 0.0 h

Teacher-student

contact : 22.0 h
Personal work : 20.0 h
Total : 42.0 h

### **ASSESSMENT METHOD**

Written report + Oral presentation

### **TEACHING AIDS**

Depending on the subject.

# **TEACHING LANGUAGE**

English

### CONTACT

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### **AIMS**

This teaching unit (EC) contributes to the following skills:

A3 Implement an experimental approach or a production approach

A5 Process data

A6 Communicate an analysis, a scientific approach, a proof or a solution in a reasoned and logical way

B2 Work, learn, evolve independently

B4 Show creativity, innovate, undertake

C1 Observing, measuring, analyzing and interpreting an activity or a system from data

C2 Modeling and designing an information, decision and production system, of goods and services

C3 Evaluating, prototyping and simulating a system

C13 Considering technological and methodological innovation

#### Skills mobilized:

A1 Analyze a system (real or virtual) or a problem

A2 Exploit a model of a real or virtual system

B3 Interact with others, team work

B7 Work in an international and intercultural context

C8 Managing supply in connection with the planning and inventory management policy

 ${\tt C9\ Localizing\ and\ assigning\ the\ production,\ storage\ and\ transportation\ processes\ to\ different\ members\ of\ the\ supply\ chain}$ 

C14 Collectively managing a project: organization, communication, group coordination

C16 Identifying, analyzing and controlling the risks inherent to a project

Understand the subject by mobilizing the relevant theoretical knowledge and by carrying out a state of the art

- Understand and formalize the research problem
- Suggest possible solutions
- Develop solutions and conduct experiments
- Analyze the results obtained and propose recommendations
- Present and defend the results of the research project

### CONTENT

Project, in pairs, allowing the student to learn and experiment a research/innovation approach, on a subject proposed and supervised by a teacher-researcher:

- appropriation of the subject
- formalization of the research problem and proposition of resolution tracks
- development of solutions and possible experiments
- results analysis and perspective proposals

## **BIBLIOGRAPHY**

Depending on the subject.

# PRE-REQUISITE

Depending on the subject.

### **INSA LYON**

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