Outils & Méthodes
Sytems and Software Tools

IDENTIFICATION

CODE : PC-S1-SOL-TF
ECTS : 1.0

HOURS

Lectures :	2.0 h
Seminars :	13.0 h
Laboratory :	0.0 h
Project :	0.0 h
Teacher-student contact :	15.0 h
Personal work :	14.0 h
Total :	29.0 h

ASSESSMENT METHOD

MCQs, Pix campaigns and 1 IEFS.

TEACHING AIDS

Available on the educational platform of the establishment: Moodle.

TEACHING LANGUAGE

French

CONTACT

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AIMS

At the end of this EC, the student knows how to use the computer for the purposes of his studies. He understands the digital environment in which he will have to work at INSA, as well as the general internal functioning of a computer, and he knows how to use the computer to produce digital works, alone or in a group.

This teaching contributes to the following School competencies:
* C5: Process data
* C6: Communicate an analysis, a scientific approach, a proof or a solution in a reasoned and logical way

by allowing the student-engineer to work and be assessed on the following knowledge:
* Know the general operation of a computer and an OS
* Know the main rules for writing a scientific report
* Know how to write Latex equations
* Be able to use Word processing tools to write a scientific report
* Be able to use a spreadsheet in an experimental scientific work context
* Have a minimum general culture in digital (security and environmental impact)

CONTENT

* Spreadsheets:
+ 2 Tools: LibreOffice Calc and Excel
+ Elementary skills : formulas, relative/absolute references
+ Graph plots : relevant choice, regressions, error bars
+ Solver : GRG and Evolutionary

* Word processor :
+ 2 tools: Word and HedgeDoc (Markdown)
+ Elementary skills: style sheet, models, figures, references, tables of contents
+ Latex equations

* General culture :
+ INSA digital environment
+ Architecture of a computer
+ Operating system
+ Security
+ Bash command line
+ Environmental impact of digital

In particular, 2 Pix courses are used to prepare or complete homework themes.

BIBLIOGRAPHY

Computer science and digital sciences, Dowek et al., Eyrolles editions (2012) - chapters 7, 10, 13, 14, 15 and 18.

PRE-REQUISITE

Know how to use a computer.

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