

# Informatique fondamentale

**Lecturer**

Emmanuel FILIOT (Coordinator)

**Course mnemonic**

INFO-F302

**ECTS credits**

5 credits

**Language(s) of instruction**

French

**Course period**

First term

## Course content

- > propositional logic (syntax, semantics, tableau algorithm, natural deduction, resolution) - first order logic ((syntax, semantics, tableaux, natural deduction, resolution) - Goedel's completeness theorem - Goedel's incompleteness theorem

## Objectives (and/or specific learning outcomes)

Give an overview of classical logics useful in computer science. Show the limits of what can be formalized using formal languages.

## Pre-requisites and co-requisites

### Co-requisites courses

MATH-F307 | Mathématiques discrètes | 5 crédits

## Course having this one as co-requisit

INFO-F308 | Projets d'informatique 3 transdisciplinaire | 10 crédits

## Teaching method and learning activities

Classical theory lectures with exercices. Realization of a small project where students have to solve a problem using a tool for solving satisfiability of propositional formulas (sat solver).

## References, bibliography and recommended reading

- > Mathematical logic for computer science, Ben-Ari, Springer. - Slides given by the teacher

## Evaluation method(s)

Oral examination

## Evaluation method(s) (additional information)

Oral exam.

## Programmes

### Programmes proposing this course at the faculty of Sciences

BA-INFO | Bachelor in Computer science | unit 3 and BA-MATH | Bachelor in Mathematics | unit 3