

# Computer sciences and numerical methods



Crédits ECTS  
3 crédits

En bref

> **Langue de cours:** Anglais

## Présentation

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### Prérequis

Basic algorithmics, elementary coding in Python, linear algebra, differential calculus, differential equations, Taylor series.

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### Description du programme

The course serves a first purpose of bringing students operational level in Python coding. Fundamental aspects of the language are presented and illustrated in practical sessions. The course then covers some fundamental aspects for the numerical solutions of:

- linear systems,
  - convex optimization problems,
  - ordinary differential equations,
  - partial differential equations.
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### Bibliographie

Lutz M. (2009), *Learning Python*, 4<sup>th</sup> edition, O'Reilly.

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### Equipe pédagogique

Frédéric Schwander

<b>Total des heures</b>		<b>24h</b>
CM	Cours Magistral	16h
TD	Travaux Dirigés	8h

## Infos pratiques

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### Nom responsable UE

#### Responsable pédagogique

Frédéric Schwander

✉ frederic.schwander@centrale-med.fr