Summary
This course teaches the students practical skills needed for solving modern physics problems by means of computation. A number of examples illustrate the utility of numerical computations in various domains of physics.

Content


Learning Prerequisites
Recommended courses
1st and 2nd years numerical physics courses

Learning Outcomes
By the end of the course, the student must be able to:
• Choose the most suitable algorithm for solving given problem
• Integrate algorithms in computer codes and evaluate their performance
• Solve actual physics problems using numerical tools

Teaching methods
Ex cathedra presentations, exercises and work under supervision

Assessment methods
3 reports during the semester
Resources

Bibliography
J. F. James, A Student's guide to Fourier transforms, CUP 2011

Ressources en bibliothèque
- Numerical linear algebra / Trefethen
- A Student's guide to Fourier transforms / James