PHYS2908 Data processing in physics

[15h] 3 credits

This course is taught in the 1st semester

Teacher(s): Krzysztof Piotrzkowski
Language: English
Level: Second cycle

Aims

The course is an introduction to the treatment and physical data simulation . Its objective is double: to give the student the theoretical bases needed to meet, by personnal work, the statistical problems of experimental physics and the computerized resolution. On this occasion the student will familiarize with computer systems of the department (this will often be his first contact with a "realistic" use of these).

Main themes

The course contains two parts:
1. Theoretical, dedicated to the notions of probability and their applications to "realistic" statistical problems of experimental physics.
2. Personnal work, largely computerized.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: - MATH 2260, Probability - MATH 1161, Numerical methods - SC1150, Introduction to computerized resolution (minimum).
Bibliography: S.L. Meyer, Data analysis for scientists and engineers, Wiley 1975; L. Lyons, Statistics for nuclear and particle physicists, Cambridge 1986; P.R. Bevington, Data reduction and error analysis fot the physical sciences, Mc Graw Hill, 1969.
Personal works require about 45 hours using the departmental computer systems.

Other credits in programs

PHYS22/G	Deuxième licence en sciences physiques	(3 credits)