
# PHYS2906 Cryophysics

[22.5h+15h exercises] 3 credits

This two-yearly course is taught in 2006-2007, 2008-2009,...
This course is taught in the 2nd semester

**Teacher(s):** Vincent Bayot
Language: French
Level: Second cycle

## Aims

The aim of the course is to introduce the student to the use of low temperature techniques and to the low temperature physics that sustains them. Cryogenic fluids are the subject of the first chapter, with emphasis on quantum fluids. In the second chapter, a comprehensive review of material properties at low temperatures is provided that focuses on mechanical, electrical and thermal properties. The course then focuses on thermometry, both primary (thermodynamics) and secondary. Chapter four deals with low temperature experimental systems, covering the entire temperature range available in laboratories. Finally, chapter five covers a few low temperature experiments that are particularly representative of the challenges encountered in low temperature physics.

## Main themes

Courses present the different chapters interactively
Then a two-days laboratory introduces the student to practical issues related to cryophysics and cryogenics.

## Other credits in programs

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| **MATR22** | Deuxième année du programme conduisant au grade d'ingénieur civil en science des matériaux | (3 credits) |
| **MATR23** | Troisième année du programme conduisant au grade d'ingénieur civil en science des matériaux | (3 credits) |
| **PHYS22/A** | Deuxième licence en sciences physiques (Physique appliquée) | (3 credits) |
| **PHYS22/G** | Deuxième licence en sciences physiques | (3 credits) |