

# Cosmologie

**Lecturers**

Thomas HAMBYE (Coordinator) and Laura LOPEZ HONOREZ

**Course mnemonic**

PHYS-F415

**ECTS credits**

5 credits

**Language(s) of instruction**

French

**Course period**

Second term

## Course content

This is an introduction to modern cosmology. There are essentially three parts: 1. Introduction: observations and basic equations. 2. The early universe: nucleosynthesis, CMB. 3. Modern topics: structures formation, dark matter, inflation. The course is accessible to a broad audience but is oriented toward aspects at the interface between cosmology and high energy physics and fundamental interactions.

## Objectives (and/or specific learning outcomes)

Elementary cosmology is easy but requires to put together concepts from various fields of physics. The course emphasizes this unity.

## Teaching method and learning activities

Lectures + readings + exercises

### References, bibliography and recommended reading

Modern cosmology, S. Dodelson  
The Early Universe, R. Kolb and M. Turner  
Gravitation, S. Weinberg

## Other information

### Contact(s)

mtytgat@ulb.ac.be

## Evaluation method(s)

Other

## Programmes

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

MA-PHYS | **Master in Physics** | finalité Research/unit 1 and finalité Teaching/unit 1