Process Control

ECTS
4 crédits

Hourly volume
36h

Introducing

Objectives

Objectives ¿ Learning outcomes :
At the end of this module, the student will have understood and be able to explain (main concepts):
Dynamic (unsteady-state) modelling of processes and its approximation by simple transfer functions such as 1rst and 2nd order without or with time delay. Implementation of feedback control loop.

The student will be able to:

Establish unsteady state mass or energy balances, obtain transfer functions from linearization of these balances or from analysis of step of impulse responses, implement a feed-back control loop with PID type controllers and study the response of the whole closed-loop system to changes (set-point variations or disturbances) as function of these controllers tuning parameters and analyse its stability.

Necessary prerequisites

Necessary knowledge :

Resolution of Ordinary Differential Equations, Laplace-transform.

Practical info

Location(s)

Toulouse