


# UE Linear optimal control

 ECTS  
3 credits

 Component  
UFR PhITEM  
(physique,  
ingénierie, terre,  
environnement,  
mécanique)

 Semester  
Automne

- > **Teaching language(s):** English
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** PAX7ECAI

## Presentation

### Description

Deterministic Linear Quadratic Regulator (LQR), Riccati equations, stochastic linear optimal control, Kalman filter, Linear Quadratic Gaussian (LQG) control, discrete-time linear optimal control and observers.

#### Objectives:

Solutions of optimal control and optimal state estimation problems with quadratic costs for deterministic and stochastic linear systems, in continuous and discrete-time.

### Course parts

UE Linear optimal control - CM/TD	Lectures (CM) & Teaching Unit (UE)	16h
UE Linear optimal control - TP	Practical work (TP)	12h

### Recommended prerequisites

Previous courses on linear systems control given by Robu and Prieur.

# Useful info

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## Campus

› Grenoble - Scientific Polygon