

# UE Introduction to mobile robotics



Level  
Baccalaureate  
+4



ECTS  
3 credits



Component  
UFR IM2AG  
(informatique,  
mathématiques  
et  
mathématiques  
appliquées)



Semester  
Printemps

- > **Teaching language(s):** English
- > **Teaching method:** In person
- > **Teaching type:** Lectures
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** GBX8MO10

## Presentation

### Description

The aim of this course is to give an introduction to software developments for mobile robotics applications and internet of things. The course is decidedly practical with several labs and a project on real robots. It uses "learning by doing" and "learning by project" approaches.

At first, the basic concepts of mobile robotics (sensors, actuators, perception, decision, action ...) and Internet of Things are presented and directly implemented on real robots to realize a software prototype of "follow me" by a small mobile robot.

In a second step, in a project, the basic concepts are deepened during the realization of a complete application of mobile robotics including Internet of Things, for example: a mobile robot "coffee dispenser", a robot "patroller", a robot "guide visit" ...

Knowledge of C / C ++ or python is essential.

The course outline can be found at :

<http://lig-membres.imag.fr/aycard/html/Enseignement/M1/Robotics2/index.html>

Course illustrations can be found at :

<http://lig-membres.imag.fr/aycard/html/Projects/Robair/robair.html>

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## Course parts

CM	Lectures (CM)	6h
TP	Practical work (TP)	27h

**Period** : Semester 8

## Useful info

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### Contacts

Program director

Olivier Aycard

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### Place

> Grenoble

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### Campus

> Grenoble - University campus