

UE Introduction to mobile robotics



Niveau d'étude
Bac +4



ECTS
3 crédits



Crédits ECTS
Exchange
3.0



Composante
UFR IM2AG
(informatique,
mathématiques
et
mathématiques
appliquées)



Période de
l'année
Printemps (janv.
à avril/mai)

- > **Langue(s) d'enseignement:** Anglais
- > **Méthodes d'enseignement:** En présence
- > **Forme d'enseignement :** Cours magistral
- > **Ouvert aux étudiants en échange:** Oui
- > **Crédits ECTS Exchange:** 3.0
- > **Code d'export Apogée:** GBX8MO10

Présentation

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>

Heures d'enseignement

TP	TP	27h
CM	CM	6h

Période : Semestre 8

Infos pratiques

Lieu(x) ville

> Grenoble

Campus

> Grenoble - Domaine universitaire