

# UE Introduction to distributed systems



Niveau d'étude  
Bac +4



ECTS  
3 crédits



Crédits ECTS  
Echange  
3.0



Composante  
UFR  
Informatique,  
mathématiques  
et  
mathématiques  
appliquées  
(IM2AG)



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

## Diplômes intégrant cet élément

- Master Informatique

- > **Langue(s) d'enseignement:** Anglais
- > **Méthodes d'enseignement:** En présence
- > **Forme d'enseignement :** Cours magistral
- > **Ouvert aux étudiants en échange:** Oui
- > **Crédits ECTS Echange:** 3.0
- > **Code d'export Apogée:** GBIN8U03

## Présentation

### Description

After presenting the major differences between a centralized system and a distributed one, this option shows students both the "user" and the "designer" side of distributed applications. Students get acquainted with existing distributed middleware and see how the latter tackle the problems of distributed system design. Are discussed the principles of distributed communication, including client/server synchronous architectures and publish/subscribe decoupled ones. The students also zoom into distributed middleware implementation and learn the basics of distributed algorithmics. Working with simple distributed topologies, they get to write simple algorithms and reason about their correctness.

---

## Heures d'enseignement

|    |    |     |
|----|----|-----|
| TD | TD | 18h |
| CM | CM | 15h |

---

## Pré-requis recommandés

Java Programming

**Période :** Semestre 8

---

## Compétences visées

- Understand the design and algorithmic challenges of distributed systems
- Learn how to use existing middleware to design distributed applications
- Learn how to design and implement simple distributed algorithms

## Infos pratiques

---

### Contacts

Responsable d'UE

Vania Marangozova

✉ [vania.marangozova@univ-grenoble-alpes.fr](mailto:vania.marangozova@univ-grenoble-alpes.fr)

---

### Lieu(x) ville

➤ Grenoble

---

### Campus

➤ Grenoble - Domaine universitaire