

UE Advanced networking



Level
Baccalaureate
+5



ECTS
6 credits



Component
UFR IM2AG
(informatique,
mathématiques
et
mathématiques
appliquées)



Semester
Automne

- > **Teaching language(s):** English
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** GBX9MO58

Presentation

Description

The purpose of the lecture is to give you more knowledge and skills in the domain of computer networking. Both theoretical and practical knowledge will be acquired.

Content:

1. Routing:
 - at Layer 2 - Spanning Tree Protocol
 - internal routing (RIP, OSPF)
 - external routing (BGP)
2. Congestion control:
 - fairness
 - AIMD algorithm
 - TCP variants (Reno, Cubic, BBR)
3. Quality of Service:
 - token bucket, scheduling
 - MPLS
4. Case study

- Next Generation Data Center Architecture

Course parts

Lectures	Lectures (CM)	36h
Practical work	Practical work (TP)	18h

Recommended prerequisites

Students should have taken the basic computer networking course.

- Routing (RIP, OSPF, BGP) - Congestion control - Quality of service - MPLS - SNMP - Case study Next Generation Data Center Architecture

Period : Semester 9

Skills

The lecture is a follow-up of the basic computer networking course and provides a more detailed view on routing protocols, congestion control, and Quality of Service. Lab exercises and manipulations will provide some practical knowledge of advanced protocols.

Useful info

Contacts

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Campus

› [Grenoble - University campus](#)