

Cloud and Digital Transformation

1. **Course number and name:** 020CLDES5 Cloud and Digital Transformation
2. **Credits and contact hours:** 4 ECTS credits, 2x1:15 contact hours
3. **Name(s) of instructor(s) or course coordinator(s):** Marlene Seif Aouad
4. **Instructional materials:** Course handouts; lab experiments; slides; in-class problems

5. Specific course information

a. Catalog description:

A panorama of the Cloud technologies and industry and its positioning into the IT landscape. What are the fundamentals of the Cloud and how it disrupts the way IT is purchased, consumed and operated. What is the definition of the Cloud, how is that different from traditional IT technically, economically, organizationally and for business efficacy and innovation. Who are the players and what are their offers? How are multinational firms taking advantage of the Cloud for their businesses? Hands-on labs and a study of a Smart Home use case using Cloud.

b. Prerequisites: None

c. Selected Elective for CCE students

6. Educational objectives for the course

a. Specific outcomes of instruction:

The course is useful to the students in their future role as engineers, whether they are a customer or a supplier belonging to the ecosystem of IT technologies:

- Know the concepts and definition of Cloud computing.
- Know the industry players and their offers.
- Understand the value of Cloud technologies and practices for IT and Business Lines.
- Understand their disruptive impact on the organization of IT departments and on the way IT is purchased, consumed and operated.
- Understand their disruptive influence on value chains and the potential contribution to businesses as well as to our societies.

b. PI addressed by the course:

PI	1.1	1.2	1.3	3.1	3.2	5.1	7.1
Covered	x	x	x	x	x	x	x
Assessed	x	x				x	x

7. Brief list of topics to be covered

- Introduction to the course
- IT organization before the Cloud (the « pre-Cloud era »)
- Cloud Fundamentals

- The infrastructure that created the Cloud
- The transformation power of the Cloud and the migration strategies
- Actors and offers of public IaaS and PaaS
- Digital Transformation: Panorama