- Faculté des sciences
- www.unine.ch/sciences

Cloud Computing (3IN2047)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en informatique	**Cours: 2 ph** **Exercice: 2 ph**	**Voir ci-dessous**	5

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Automne

Equipe enseignante

Lectures: Dr. Lorenzo Leonini
Assistant:

Contenu

The Cloud Computing course features 10 lectures (will be complemented upon need by tutorials sessions).

Topics covered:

- Cloud Computing model and landscape
- Virtualization and isolation
- Lightweight virtualization and containers (Docker)
- Orchestration (Docker Swarm, Kubernetes)
- Micro-services and RESTful APIs
- Platform-as-a-Service and service-oriented architecture
- Cloud storage / NoSQL
- High availability
- Consistency models and algorithms
- Cloud security

Tutorials:
- Containers and Docker
- TBD

Practical project:
- Scalable REST backend micro-services

Forme de l'évaluation

The evaluation is on the final exam (50% of the grade) and the grade of the project assignments (3 parts of 12.5% each) and a reading assignment of 12.5% (presentation of a research paper).
Upon failure at the exam, the grade for the assignments will be kept when the student passes the exam another time.

Documentation

No book required. Pointers to online resources will be provided in class.

Pré-requis

Ability to program in general-purpose high-level programming languages, such as Python or Ruby. Assistance will be provided for students who do not know these languages. The class requires student to use their own laptops. Students without a laptop should contact the instructor who will seek an arrangement.

Forme de l'enseignement

Lectures, tutorials, practical projects, and reading seminar