

MAS

Master of Advanced Studies
Maîtrise d'études avancées

The Internet of Things

Certificates of Advanced Studies in the Internet of Things



The Internet of Things (IoT) is expected to be the next major technological wave, with over 50 billion connected devices by 2020, over 14 trillion US\$ economic value creation by 2022, and major gains in efficiency for the industry and public administrations. In response to this evolution, professionals and companies need to develop their expertise, update their knowledge and support innovative solutions.

The Master of Advanced Studies (MAS) in the Internet of Things (MAS-IoT) is co-organized by the University of Geneva, the IoT Forum and Mandat International. The programme includes the Certificate of Advanced Studies (CAS) in IoT Fundamentals, the CAS in IoT Networks and Standards, the CAS in IoT Security and Privacy and the CAS in IoT Applications.

The course has been tailored to provide active professionals an IoT cutting edge education. Its a modular and flexible program , allows the incremental build-up and capitalisation of knowledge, and has a minimal impact on the professional activities of the participants.

A strong emphasis will be placed on knowledge transfer to the participant's work environment through case studies, lessons and the followup of the master thesis. Personalized coaching and mentoring will be proposed throughout the training.

Objectives

- Provide a multidisciplinary education on the Internet of Things with cutting edge experts from the European research and industry ecosystem.
- Empower the professionals to lead the evolution of the IoT in companies and in public administrations.
- Develop skills and expertise articulating academic knowledge and business expertise.
- Encourage the pooling of experience and knowledge between peers and with stakeholders to develop innovative approaches.
- Build a professional network.

Skills and Competences

- Master strategic and holistic view of the Internet of Things encompassing the IoT ecosystems and deployments, and the technological, societal and business dimensions.
- Capacity to lead Internet of Things strategies, projects, implementation and deployments.
- Develop an innovative, interdisciplinary and holistic approach.
- Identify critical issues and solutions related to Internet of Things strategy design and implementation.

Target Audience

Chief technology officers; Members of direction or managers in charge of defining the technological strategy of their company; Civil servants in charge of smart cities planning, deployment and maintenance; Directors of information systems; Project managers with IoT; Research and innovation managers; Business and production managers; Engineers with several years of experience.

Programme Structure

MAS in Internet of Things

12 thematic modules (average 24 hours of teaching per module) organised in 4 parts: IoT Fundamentals, IoT Networks and Standards, IoT Security or Privacy, IoT Applications

A written master thesis, with two subcategories focusing on:

- a) Research, innovation and analysis
- b) IoT deployment plan and implementation

- Dissertation: 336 hours
- Teaching: 288 hours
- Number of ECTS Credits: 60
- Each module is subject to an evaluation in order to be accredited

CAS in IoT Fundamentals, CAS in IoT Networks and Standards, CAS in IoT Security or Privacy, CAS in IoT Applications

Each CAS (12 ECTS credits) can be attended individually and be credited in the MAS programme in a period of 3 years. Each CAS will comprise 3 thematic modules, followed by an individual or group work and/or examination tests.

Some modules may be attended individually, on request.

CAS | IoT Fundamentals

- Overview IoT Landscape, Evolution and Trends
- IoT Hardware, Enablers and Sensor Networks
- IoT Architectures and Main IoT Platforms

CAS | IoT Networks and Standards

- IoT Communication, Interoperability and Standards
- IoT Networks, IPv6 and Scalability
- Designing and Deploying IoT Enterprises

CAS | IoT Security and Privacy

- IoT Security
- IoT Privacy and Personal Data Protection
- IoT Information Management System

CAS | IoT Applications

- IoT Market, Value Creation and Business Models
- Smart Cities and other IoT Application Domains
- IoTathon – Use-case Design and Deployment Exercise

Programme Direction

- Prof. Dimitri Kostantas, CUI, University of Geneva
- Sébastien Ziegler, IoT Forum and Mandat International

Coordination

- Dimitri Konstantas, University of Geneva

General Information

Registration Criteria for the MAS

- At least Bachelor (or equivalent degree)
- Ability to speak and write in English
- At least 3 years of professional activity in a related domain

Registration Fees

- CHF 17,500.- for the MAS
- CHF 5,000.- per CAS

Some modules may be attended individually, on request.

Participants who would obtain the four CAS over a period of time of three years, can apply to the MAS with a complementary registration fee of CHF 2,500.

Number of Participants

Minimum: 10 | Maximum: 22

Application and Deadline

Application may be submitted via the course website at mas-iot.unige.ch by September 2017.

Contact

Email: masiot@unige.ch

mas-iot.unige.ch

IoT  Forum

