The Course

To be able to understand fundamental **data protection** challenges, interpret the technical implications of **privacy**, understand current **digital trends** such as **artificial intelligence** and **blockchains**, and communicate properly with technical experts who develop and maintain digital systems, it is crucial for professionals to have a core understanding of notions and concepts from computer science and **information security**.

Intended for professionals who see information and communication technologies (ICT) as an opportunity to better engage with beneficiaries and clients, this **5-day course** will give you and your organization the ability to take more leadership responsibilities in digital innovation, instead of merely moderating between IT stakeholders.

COURSE OBJECTIVES

- Learn fundamental ICT concepts and gain a sense of how you can use technology to enable your digital transformation.

- Deepen your understanding of ongoing discussions on the technical opportunities and risks of artificial intelligence, big data, blockchains and more.

- Gain a realistic understanding of cybersecurity and data security threats, through case studies related and adapted to your sector of activity.

- Assess your current digital approach to identify gaps and opportunities.

- Build consensus by demonstrating how digital strategy can transform your impact.

COURSE INFORMATION

The course is offered under EPFL's continuing education framework for professional education, in collaboration with the Formation Continue UNIL-EPFL (FCUE).

- 5 days, 7 hours/day (with breaks)

- Certificate of attendance issued by the FCUE

- **Contact:**
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COURSE CURRICULUM

Fundamentals of ICT

- Computer processing, software, and bugs

- Software engineering (coding) practices and software licensing

- Computer networks, network security, and the Internet

Data protection and privacy

- Data management, big data, clouds and the Internet of things (IoT)

- Cryptography and an outlook into a quantum future

- Privacy, data protection, including modern cryptography trends

Cybersecurity and Digital Trust

- Decentralized trust: blockchain and smart contracts

- User experience: promoting trust and good behaviour

- Cyber-threats, cybersecurity and their consequences

Towards artificial intelligence

- Data analysis, artificial intelligence (AI) and machine learning (ML)

- Data analysis risks and mitigation: false results, biases, and other threats

- Technologies underlying social networks (e.g. Facebook)

COURSE SPEAKERS

The courses are developed by the **Center for Digital Trust (C4DT)** at EPFL, in close partnership with **our partners**. They will be taught by faculty with particular expertise in artificial intelligence, machine learning, blockchain and cryptography, cybersecurity, and privacy.

Faculty are carefully selected high-level ICT experts, able to engage with a non-technical audience. They are accomplished professors from **EPFL**, and seasoned industry professionals from C4DT partners such as **ELCA** and others.

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