

COURSE PLAN

Foundations of Information and Communication Technologies

5-day executive course in collaboration with ICRC — November, 25–29, 2019

Subject to modification.

Monday, November 25 - @Humanitarium, Geneva

09:00	Welcome and introduction <i>Coffee break</i>	C4DT+ICRC
10:15	Computers, software, systems and engineering	Dubochet
12:15	<i>Lunch Break</i>	
13:15	Networks and the web <i>Coffee Break</i>	Monod
15:30	Cryptography, including quantum systems	Monod
	<i>End at 17:30</i>	

Tuesday, November 26 - @Humanitarium, Geneva

09:00	Data, big data, clouds and the internet of Things (IoT) <i>Coffee Break</i>	Dubochet
11:15	Decentralized Trust: Blockchain, smart contracts	Gasser
12:15	<i>Lunch Break</i>	
13:15	From data analysis to Artificial Intelligence (AI) and Machine Learning (ML) <i>Coffee break</i>	Aberer
16:30	Social networks	Aberer
	<i>End at 17:30</i>	

Wednesday, November 27 - @Humanitarium, Geneva

09:00	Biases, ML performance and adversarial ML threats <i>Coffee Break</i>	Troncoso
12:45	<i>Lunch Break</i>	
13:45	Privacy, data protection <i>Coffee break</i>	Troncoso
15:30	Hand-on exercise: understanding tradeoffs in big data and ML	Overdorf and Lueks
	<i>End at 17:30</i>	

Thursday, November 28 - @EPFL, Lausanne

09:00	Cybersecurity, threat modeling and solutions <i>Coffee break</i>	Bogos
12:15	Cybersecurity, consequences and attribution	Bogos
13:15	Lunch Break and travel to data center (Renens)	
14:45	Data center visit: context	Gentile
15:45	Data center visit and discussions	
	<i>End at 17:30</i>	

Friday, November 29 - @Humanitarium, Geneva

09:00	Hands-on case study <i>Coffee break</i>	Dubochet
11:30	Hands-on cyberattack experience	ICON
13:00	<i>Lunch break (with group work)</i>	
13:45	Hands-on cyberattack experience (continued)	
15:00	User experience and trust <i>Coffee break</i>	Jones
16:00	Conclusion, future outlook, wrap up	C4DT+ICRC
	<i>End at 17:00</i>	
