Hochschule München University of Applied Sciences

Courses in English
Course Description

Department	07 Computer Science and Mathematics
Course title	**Security in Mobile Networks**
Hours per week (SWS)	4
Number of ECTS credits	5
Course objective	After taking this course, students will be able to: - understand secure mobility at different layers in the networking stack - decide and reason about the most appropriate secure mobility solution for a specific application - implement secure mobility - read and apply standards documents - discover security risks in mobile communication systems
Prerequisites	Computer Networks I or equivalent know-how
Recommended reading	Sources: - Standards, e.g.: - IETF RFCs: 5795, 4301, 8446, 4225, 6275, 4555 - 3GPP (https://www.3gpp.org/specifications/specification-numbering) TS23.401, TS 33.401, TS 23.501, TS 23.502, TS23.503, TS33.501, TS 33.102, TS 33.126, TS 33.127, TS 33.128 - IEEE 802.11 - Bluetooth core specification (https://www.bluetooth.com/specifications/specs/core-specification-5-2/) - recent research papers, e.g from the conferences: Usenix Security, IEEE Symposium on Security and Privacy, ACM Conference on Computer and Communications Security
Teaching methods	Seminaristic teaching with lab sessions, Presentation slides with beamer, blackboard, flipchart, etc.
Assessment methods	Seminar Paper Presentation
Language of instruction	English
Name of lecturer	Prof. Dr. Alf Zugenmaier
Email	alf.zugenmaier@hm.edu
Link	https://www.cs.hm.edu/die_fakultaet/ansprechpartner/professoren/zugenmaier/index.de.html https://zpa.cs.hm.edu/public/module/362/
Course content	The emphasis is on one or more of the following topics: - introduction to wireless network security - authentication/key management in wireless LAN; - security issues in cellular networks; - secure handover; - authentication / key management in cellular networks - lawful intercept requirements - security in network layer mobility, such as mobile IP or mobIKE - security in application layer mobility - privacy
Remarks	