

saarland-informatics-campus.de

Courses WS2024/25

Telecommunications Lab

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SAARLANDES

SIC Saarland Informatics
Campus



Digital Transmission & Signal Processing

- Core- / Advanced Lecture 9CP (4L2T)
 - Tuesdays 12:15–13:45, Wednesdays 08:30–10:00, **Start October 15th**
 - Lectures & Tutorials: Hybrid **E1 3 HS001**, **C6 3 9.05** & **MS-Teams** (LIVE, no recording!)
 - Assignments & Quizzes: **UdS-Moodle** (100% paperless)
- All major building blocks of modern telecommunication systems
 - Discretization (Sampling & Quantization), Digital Modulation (PSK, QAM), Multicarrier-Transmission (OFDM), Forward Error Coding, Deep Learning
- ...and the underlying mathematical foundations
 - Fourier-, Laplace-, Z- and Hilbert-Transforms, Algebra on Finite Fields (Prime Fields and extended Prime Fields), Stochastic Signal Analysis, **Neural Networks**
- **Registration mandatory via Moodle:**
<https://moodle.uni-saarland.de/enrol/index.php?id=10003>
 - You should also join the MS-Teams Team for participating remotely!
 - Information is also on the Computer Science CMS!



Audio/Visual Communication & Networks / 5G

- Core- / Advanced Lecture 9CP (4L2T)
 - Tuesdays 10:15–11:45, Wednesdays 12:15–13:45, **Start October 15th**
 - Lectures & Tutorials: Hybrid **E1 3 HS001, C6 3 9.05** & **MS-Teams** (LIVE, no recording)
 - Assignments & Quizzes: **UdS-Moodle** (100% paperless)
- Implementation
 - **eBook “5G NR”** available to all students!
 - Background theory via **interactive manuscript**
- **5G New Radio** (demystified 😊)
 - Wireless transmission (propagation, link budgets)
 - Multiple access (T-/F-/C-/S-DMA), (Massive-) MIMO
- **Registration mandatory via Moodle:**
<https://moodle.uni-saarland.de/enrol/index.php?id=10004>
 - You should also join the MS-Teams Team for participating remotely!
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Hands on Networking 2025

- Organization
 - Block Course CW11/12 2025 (**10.–21. March 2025**), daily 8:30–15:00
 - Individual project work (**–06. April 2025**)
 - **Admission test** in January (date to be communicated)
 - Course Announcements and Material: **UdS-Moodle** (100% paperless)
- Networking Practice
 - Wired & Wireless Networks (Physical & Link Layer)
 - Network Addressing (IPv4 & IPv6)
 - Transport Protocols (UDP, TCP, QUIC)
 - Network Management & Debugging (GNS3)
- **Registration mandatory via Moodle:**
 - Link will be provided on our websites:
<https://www.nt.uni-saarland.de/education/>
<https://moodle.uni-saarland.de/>

