

## Course Description – Winter Semester 2024/25

<b>Title</b>	Communication Systems
<b>Faculty</b>	Electrical Engineering
<b>Professor</b>	Prof. Dr. Carsten Roppel
<b>ECTS</b>	5
<b>Level</b>	Master
<b>Requirements</b>	Bachelor Degree
<b>Add. Information</b>	Basic knowledge in electrical engineering, signals and systems and digital signal processing is recommended.
<b>Content</b>	<p>Lecture and laboratory</p> <ol style="list-style-type: none"> <li>1 Design Principles The OSI Reference Model, Network Topologies, Circuit Switching and Packet Switching, Reliable Transmission</li> <li>2 The Physical Layer Digital Baseband Transmission, Digital Modulation, Wireless Transmission, Wireline Transmission, Channel Coding</li> <li>3 The Data Link Layer Medium Access Control, Ethernet</li> <li>4 The Network Layer and the Transport Layer Internet Protocol (IP), Transport Protocols, Performance Parameters</li> <li>5 Sensor Networks</li> </ol>