### Data field | Explanation
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Module number | WP06
German title / English title | Multimedia-Rundfunksysteme / Multimedia Broadcast Systems
Credits | 5 ECTS
Workload | 68 Contact hours (4 SWS Ü), 82 Hours of independent study
Subject coverage | Subject-Specific Specialization

#### Learning outcomes
- Students know the fundamentals of audio and video signals and multimedia coding for broadcast systems; how to measure quality of coded multimedia signals; and fundamentals of broadcast systems and current standards. They can apply the knowledge in simulating coding methods and implementing and configuring broadcasting systems.

#### Requirements
- Recommendation: Basic knowledge in digital communication systems and signal processing

#### Level
- 1./2. Semester

#### Type of module
- Seminar, Laboratory Training

#### Status
- Required-Elective module

#### Semesters when offered
- Every semester

#### Method of assessment / Type of examination
- The method of assessment / type of examination must be defined by the lecturer within the deadline determined in §19 (2) RSPO. Should the deadline pass without determination of the form of assessment in the module, the following method of assessment / type of examination applies: 50% Written examination, 50% Written laboratory report of the laboratory group with consultation

#### Grade assessment
- See study and examination regulations

#### Equivalent modules
- Modules with similar content

#### Content
- Analog and digital audio and video signals
- Audio and video transport and coding for broadcasting systems (MPEG, H264.x, Dolby Digital)
- Audio and video quality analysis
- Digital audio broadcasting standards (DAB(+), DRM(+) and others)
- Digital video broadcasting standards (DVB-T/C/Sx and others)
- Internet radio and IP-TV
- Multimedia Broadcast Multicast in 3-5G Mobile Communication Systems
- Lab training including selected topics in audio and video coding, setup and configuration of a broadcast system, measurements in broadcast systems

#### Reading list
- W. Fischer: Digital Video and Audio Broadcasting Technology, Springer
- M. Wien: High Efficiency Video Coding, Springer
- M. Bosi, R. Goldberg: Introduction to Digital Audio Coding and Standards, Springer

#### Further information
- Language employed in the module: English

#### Required Room type
- U-Sem, U-Lab