

# Course Manual AVT

Audio and Video Technologies

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## – General information

**Long name** Audio and Video Technologies

**Approving CModule** [AVT MaMI](#), [AVT MaTIN](#)

**Responsible** Prof. Dr.-Ing. Klaus Ruelberg  
Professor Fakultät IME

**Valid from** winter semester 2020/21

**Level** Master

**Semester in the year** winter semester

**Duration** Semester

**Hours in self-study** 78

**ECTS** 5

**Professors** Prof. Dr.-Ing. Klaus Ruelberg  
Professor Fakultät IME

**Requirements** none

**Language** German, English if necessary

**Separate final exam** Yes

## Literature

Proakis, J. Salehi, M. (2007) Digital Communications. McGraw-Hill. ISBN 978-0072957167

Reimers, U. (2001) Digital Video Broadcasting. Springer Verlag. ISBN 978-3-662-04562-6

## Final exam

**Details** Standard case (with large number of examinations sK)  
In a final examination (oral, optionally written), the students demonstrate their competences in summary form. The examination comprises exemplary subareas of the course

**Minimum standard** 50 % of the maximum score

**Exam Type** EN mündliche Prüfung, strukturierte Befragung

## – Lecture / Exercises

### Learning goals

Goal type	Description
Knowledge	Audio and video source coding
Knowledge	Channel models, channel coding (FEC & digital modulation principles)
Knowledge	Broadcast transmission systems (DVB - Digital Video Broadcasting)
Skills	implement audio and video coding methods in hard and software
Skills	develop algorithms and methods for audio and videocoding
Skills	develop and implement digital broadcasting systems

### Special requirements

none

<b>Accompanying material</b>	lecture slides, electronic development tools, e.g. MatLab
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<b>Separate exam</b>	No
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### Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	3
Exercises (whole course)	1
Exercises (shared course)	0
Tutorial (voluntary)	0