

Course Manual EM2

Electronic Media 2

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– General information

Long name Electronic Media 2

Approving CModule [EM2_BaMT](#)

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

Valid from winter semester
2021/22

Level Bachelor

Semester in the year winter semester

Duration Semester

Hours in self-study 60

ECTS 5

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

Requirements Basic knowledge
mathematics: Basic
knowledge integral and
differential
mathematics, complex
numbers
Electronics, Electronic
Media 1, Mathematics 1

Language German

Separate final exam Yes

Literature

Schmidt, Ulrich (2013): Professionelle Videotechnik.
Springer Vieweg. Springer Vieweg. ISBN 978-3-642-
38991-7

Ohm, J. Lüke, H.D. (2014): Signalübertragung.
Springer Verlag. ISBN 978-3-642-53901-5

Final exam

Details Exam - The students
apply their knowledge
to several practical
exercises. Furthermore,
they describe and
explain some of the
technical concepts
which were presented
in the lecture.

Minimum standard Simple calculations of
SNR (Signal to Noise
Ratio) and data rates of
audio and video signals
Describe concepts of
digitalization and
compression of audio
and video signals

Exam Type EN Klausur

– Lecture / Exercises

Learning goals

Goal type	Description
Knowledge	Basic concepts of electronic communication techniques and signal theory
Knowledge	Basic concepts of electronic TV and image scanning/sampling
Knowledge	Analog video technology
Knowledge	Digital video technology
Skills	Analysis and description of analogue and digital systems for sampling and processing of audio and video signals

Special requirements

none

Accompanying material

Lecture slides

Separate exam

No

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Exercises (whole course)	0
Exercises (shared course)	0
Tutorial (voluntary)	0

– Practical training

Learning goals

Goal type	Description
Skills	Exemplary application of the course contents to practical tasks
Knowledge	Illustration of teaching content and technical phenomena

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Practical training	3
Tutorial (voluntary)	0

Special requirements

Knowledge and competences from the courses
Electronics, Electronic Media 1 and 2

Accompanying material Test instructions

Separate exam No