

# Course Manual AVW

Visual and Auditive Perception

Version: 1 | Last Change: 12.09.2019 20:39 | Draft: 0 | Status: vom verantwortlichen Dozent freigegeben

## – General information

**Long name** Visual and Auditive Perception

**Approving CModule** [AVW BaMT](#),  
[AVW BaOPT](#)

**Responsible** Prof. Dr. Dietmar Kunz  
Professor Fakultät IME im Ruhestand

**Valid from** winter semester  
2020/21

**Level** Bachelor

**Semester in the year** winter semester

**Duration** Semester

**Hours in self-study** 36

**ECTS** 3

**Professors** Prof. Dr. Dietmar Kunz  
Professor Fakultät IME im Ruhestand  
Prof. Dr.-Ing. Christoph Porschmann  
Professor Fakultät IME

**Requirements** none

**Language** German

**Separate final exam** No

## Literature

Christoph von Campenhausen: „Die Sinne des Menschen“

David H. Hubel: „Auge und Gehirn – Neurophysiologie des Sehens“

Zwicker, E., Feldtkeller, R. (1967). „Das Ohr als Nachrichtenempfänger,“ S. Hirzel Verlag, Stuttgart.

Blauert, J. (1999), „Spatial Hearing,“ MIT Press, Cambridge, Mass.

Blauert, J., Xiang, N. (2008): „Acoustic for Engineers – Troy Lectures,“ Springer Verlag, Heidelberg.

Weinzierl, Stefan (2008). „Handbuch der Audiotechnik,“ Springer Verlag, Berlin.

## – Lecture / Exercises

### Learning goals

| Goal type | Description  |
|-----------|--|
| Knowledge | visual perception<br>structure of the visual system<br>perception of brightness<br>perception of contrast<br>spatial resolution<br>temporal resolution<br>colour perception<br>perception of spatial depth   |
| Knowledge | auditory perception<br>human auditory system<br>loudness perception<br>pitch perception<br>spatial hearing<br>mechanisms of localisation<br>distance perception<br>cocktail-party effect<br>precedence effect / sum<br>localisation<br>spectral and temporal masking |
| Knowledge | audiovisual interaction<br>audiovisual precedence effect<br>Mc Gurk effect   |
| Skills    | specify requirements for<br>audiovisual media systems  |
| Skills    | assess performance of audiovisual<br>systems with respect to human<br>perception   |

### Expenditure classroom teaching

| Type                 | Attendance (h/Wk.) |
|----------------------|--------------------|
| Lecture              | 3                  |
| Tutorial (voluntary) | 0                  |

### Special requirements

none

|                              |   |
|------------------------------|---|
| <b>Accompanying material</b> | electronic presentation sheets, electronic tutorials<br>literature<br>videos (in prep.) |
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|                      |     |
|----------------------|-----|
| <b>Separate exam</b> | Yes |
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### Separate exam

|                  |   |
|------------------|---|
| <b>Exam Type</b> | EN Übungsaufgabe mit fachlich / methodisch eingeschränktem Fokus unter Klausurbedingungen lösen |
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|                |   |
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| <b>Details</b> | regular short written exams (5 min) at the end of the lecture |
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|                         |   |
|-------------------------|---|
| <b>Minimum standard</b> | at least 50% of points after subtraction of the number of points that ist achievable on average by pure random guess. |
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