

# Course Specifications

Valid in the academic year 2018-2019

Course size (nominal values; actual values may depend on programme)

|         |     |            |      |             |        |
|---------|-----|------------|------|-------------|--------|
| Credits | 3.0 | Study time | 90 h | Contact hrs | 15.0 h |
|---------|-----|------------|------|-------------|--------|

Course offerings and teaching methods in academic year 2018-2019

|                |       |                  |        |
|----------------|-------|------------------|--------|
| A (semester 1) | Dutch | lecture          | 15.0 h |
|                |       | seminar: coached | 5.0 h  |
|                |       | exercises        |        |

Lecturers in academic year 2018-2019

|                    |      |                    |
|--------------------|------|--------------------|
| Botteldooren, Dick | TW05 | lecturer-in-charge |
|--------------------|------|--------------------|

Offered in the following programmes in 2018-2019

|   | crdts | offering |
|---|-------|----------|
| <a href="#">Bachelor of Science in Speech Language and Hearing Sciences</a><br>(main subject Audiology) | 3     | A        |

Teaching languages

Dutch

Keywords

sound propagation, acoustic materials, room and building acoustics, acoustics of the ear, psycho-acoustics, effects of sound

Position of the course

The goal of this course is to make students familiar with basic acoustic concepts. It completes the courses on physics with more application oriented concepts and complements physiological knowledge of human hearing with acoustic and psycho-acoustic insights.

Contents

The course is built around four themes:

- 1 Psycho acoustics and effects of noise: loudness, sound quality, saliency, binaural hearing, effects on people.
- 2 Environment and building acoustics: approximate description of propagation outdoors and indoors, absorbing and insulating structures.
- 3 Room acoustics: acoustic quality of theatres and smaller rooms, study of and adaptation of these spaces
- 4 Acoustic models that approximate physiology of the human ear and hearing.

Initial competences

Knowledge of physics is recommended.

Final competences

- 1 General purposes:  
Integration and reformulation of knowledge and insights at the interface of various domains considering the general cognitive learning outcomes:
  - related to medical and exact learning outcomes
  - related to hearing/verstibular: development and disorders
- 2 General purposes:  
Functioning with full autonomy and a wide degree of initiative and taking co-responsibility for the determination of collective results regarding the specific professional learning outcome:
  - related to audiological learning outcomes
- 3 Integrate and reformulate knowledge and insight in acoustics, in particular have in depth knowledge and understanding of acoustic concepts ranging from physics to perception of sound.
- 4 Integrate and reformulate knowledge of and insights into the interface of different

- domains, in particular regarding hearing and sound
- 5 Apply new, complex skills related to physics of sound

#### Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

#### Conditions for exam contract

Access to this course unit via an exam contract is unrestricted

#### Teaching methods

Lecture, seminar: coached exercises

#### Learning materials and price

Annotated slides available via Minerva.

#### References

See slides

#### Course content-related study coaching

After making an appointment with the professor.

#### Evaluation methods

end-of-term evaluation

#### Examination methods in case of periodic evaluation during the first examination period

Oral examination

#### Examination methods in case of periodic evaluation during the second examination period

Oral examination

#### Examination methods in case of permanent evaluation

#### Possibilities of retake in case of permanent evaluation

not applicable

#### Extra information on the examination methods

Aural exam with written preparation that evaluates knowledge and understanding via theoretical and application oriented questions.

#### Calculation of the examination mark

100% of the final score is determined during the oral exam