

COURSE INFORMATION „COMMUNICATION ACOUSTICS“

summer semester 2017	edX	English	3 SWS
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What to expect?

Communication acoustics include all branches of acoustics dealing with communication systems between humans, between humans and machines, and between machines (e.g. speech acoustics, electro acoustics, audio technology). The open online course introduces you to this topic giving an overview of the different branches of acoustics. The following renowned experts from each area of expertise, which are united in the TU9 alliance, combine their knowledge to communicate basic principles, and to highlight current applications in communication acoustics . . .

RWTH Aachen	TU München	TU Berlin
Prof. Michael Vorländer Prof. Janina Fels	Prof. Bernhard Seeber Prof. Gerhard Müller Dr. Martin Buchschmid	Prof. Sebastian Möller Prof. Stefan Weinzierl
TU Dresden	Chalmers University of Technology	
Prof. Ercan Altinsoy	Prof. Jens Ahrens	

What are the course contents?

Week 1	Fundamentals of Acoustics	Week 9	Sound field analysis and synthesis
Week 2	Fundamentals of signals and systems	Week 10	Room Acoustics
Week 3	Anatomy and physiology of the hearing system	Week 11	Room Simulation
Week 4	Psychoacoustics	Week 12	Automatic Speech Recognition and Text-to-Speech Synthesis
Week 5	Speech Acoustics	Week 13	Product Sound Design
Week 6	Electroacoustics	Week 14	Perceptual Audio Coding + Psychoacoustics in Product Development

Week 7	Sound recording and reproduction		Examination
Week 8	Binaural technology		Re-examination

What are the requirements for participation?

Basic knowledge of signal processing and physics are considered helpful. Still, both topics will be introduced in a chapter on basic principles.

May I collect credit points with this course?

After successful attendance a certificate of participation may be acquired. In general, every student of a German university may participate in presence examinations gaining possible ECTS. Please consider relevant regulations of each university/faculty and program of study!

Presence examinations take place at RWTH Aachen, TU Berlin, TU Dresden, as well as, at TU München.

Any questions?

For all questions concerning the MOOC Communication Acoustics, please contact stefan.hillmann@tu-berlin.de