

Course pro memoria for Digital Audio Signal Processing – Chalmers International Master’s Program in Sound & Vibration – Quarters 5/6: 2018/2019

Chalmers University of Technology
Division of Applied Acoustics
2018-09-10

ECTS credits: 7.5

Lecturer: Jens Ahrens (JA). Phone: 772-2210. E-mail: jens.ahrens@chalmers.se

Course assistant: Carl Andersson (CA), E-mail: carl.andersson@chalmers.se

Course literature: Electronic documents downloadable from course web page

Schedule: Lectures and in-class exercises according to the attached schedule.

Lecture room: Lecture room at the Division of Applied Acoustics, Sven Hultins gata 8 A.

Exercise classes: Exercises consist of in-class tutorials and individual Matlab programming home assignments

Grading: Grading will be based on the submitted home assignments.

Administrator’s office hours for students: The division’s administrator is Camilla Gäverström. Phone: 772 2200. E-mail: camilla.gaverstrom@chalmers.se.

Date	Event	Week Day	Time	Who	Contents
Sep 7	L1	Fri	10-12	JA	Fourier Transform, quantization
Sep 14	L2	Fri	10-12	JA	Sampling, AD / DA conversion
Sep 18	E1	Tue	10-12	CA	Quantization, sampling
Sep 21	L3	Fri	10-12	JA	LTI systems / Filters
Sep 25	E2	Tue	10-12	CA	Filters
Sep 28	L4	Fri	10-12	JA	Filters
Oct 1	L5	Mon	13-15	JA	Filters / Measurement of LTI-systems
Oct 1	E3	Mon	10-12	CA	Filters
Oct 5	L5	Fri	10-12	JA	Filters / Measurement of LTI-systems
Oct 9	E4	Tue	10-12	CA	Measurement of LTI-systems
Oct 12	L6	Fri	10-12	JA	Fast convolution, non-linear systems
Oct 16	E5	Tue	10-12	CA	Fast convolution
Oct 19	L7	Fri	10-12	JA	Dynamic range control
Oct 23	E6	Tue	10-12	CA	Dynamic range control
Oct 26	L8	Fri	10-12	JA	Delays / tba
Nov 6	E7	Tue	10-12	CA	Dynamic range control
Nov 9	L9	Fri	10-12	JA	Source-filter processing
Nov 13	E8	Tue	10-12	CA	Delays
Nov 16	L10	Fri	10-12	JA	Pitch-shifting/time-scaling
Nov 20	E9	Tue	10-12	CA	Delays
Nov 23	L11	Fri	10-12	JA	Pitch detection
Nov 27	E10	Tue	10-12	CA	Pitch detection
Nov 30	L12	Fri	10-12	JA	Plugins
Dec 4	E11	Tue	10-12	CA	Spectral modelling synthesis
Dec 7	L13	Fri	10-12	JA	Perceptual audio coding
Dec 11	E12	Tue	10-12	CA	tba
Dec 14	L14	Fri	10-12	JA	tba