

Assessment and subject description

ÓbudA University Kandó Kálmán Faculty of Electrical Engineering		Institute of Communication Engineering		
Subject name and code: Communication technics I. lecture KHTHI11AND				Credits: 3
Full-time, Autumn Semester				
Course: Electrical Engineering				
Responsible:	Tibor Wühl PhD		Teaching staff:	Peter Vámos PhD
Prerequisites:		KMEMA11**D; KHTVT22**D		
Contact hours per week:	Lecture: 2	Class discussion: 0	Lab hours: 0	Tutorial: 0
Assessment and evaluation:	2 mid-semester tests, repeat test if necessary, Exam: written (test) and oral if necessary.			
Subject description				
<i>Aims:</i> The subject provides an overview and comprehensive knowledge on the whole area of telecommunications. It also lays fundamentals for the subjects Communication technics II. and Communication technics III.				
<i>Topics to be covered:</i>				
Topics			Week	Lessons
Introductory overview, basic concepts, classification of signals			1	2
Human sense organs, eyesight and hearing. Acoustics and colorimetry.			2	2
Fourier decomposition and spectral analysis.			3	2
Analogous modulation technics (AM, FM and PM).			4	2
Digital modulation methods (ASK, FSK and PSK).			5	2
1 st mid-semester test			6	2
Quadrature amplitude modulation methods (analogous and digital QAM)			7	2
A/D conversion, PAM and PCM signals.			8	2
Antennae and wave propagation, electronic and optical waveguides.			9	2
Radio broadcast technics (AM, FM, DAB)			10	2
Television broadcast technics, analogous and digital systems.			11	2
2 nd mid-semester test			12	2
Communication network topology, switching.			13	2
Repeat test and pretest.			14	2
Laboratory subjects			Week	Lessons
No labs				
Assessment and evaluation: For the signature it is required an average grade 2 (pass mark) or better on mid-semester and/or repeat tests.				
Examination: Written (test) and oral if necessary.				
Required material: Gilbert Held: Understanding Data Communications, Wiley, ISBN 0-672-32216-1 Ray Horak: Telecommunications and Data Communications Handbook, Wiley, ISBN-978-0-470-04141-3 Roger L. Freeman: Fundamentals of Telecommunications ,Wiley, ISBN-0-471-29699-6				
Suggested material:				