

Lecture Content and Schedule

Integrated Circuits for Broadband Communications

- Version 29.08.2026, modifications possible, please check regularly
- On Fridays, lectures and tutorials (1. and 2. DS) are in GÖR 226
- On Tuesdays (5. DS), lectures and tutorials are in GÖR 229
- Please bring your portable personal computer (laptop) to lab tutorial sessions
- Lecturer: Prof. Frank Ellinger
- Tutorials and contact: Dr. Gunia, marco.gunia@tu-dresden.de

Lectures			Tutorials		
No	Date	Content	No (min)	Date	Content
1	13.10.26 (5. DS)	0. Prelude (11/11) 1. Apps, standards & technologies (9/12)			
2	16.10.26 (1. DS)	2. System considerations (27/29)			
3	16.10.26 (2. DS)	3. Optical devices (22/29)	1 (90)	20.10.26 (5. DS)	<i>ICBC theory tutorial I: System considerations</i>
4	27.10.26 (5. DS)	3. Optical devices (continued)			
5	30.10.26 (1. DS)	4. Transimpedance amplifiers (59/95)			
6	30.10.26 (2. DS)	4. Transimpedance amplifiers (continued)			
7	3.11.26 (5. DS)	5. Limiters and buffers (31/33)	2-3 (180)	6.11.26 (1.-2. DS)	<i>ICBC theory tutorial II: Common amplifier topologies</i>
8	10.11.26 (5. DS)	6. Laser drivers (22/25)			
9	13.11.26 (1. DS)	7. Voltage controlled oscillators (51/74)			
10	13.11.26 (2. DS)	7. Voltage controlled oscillators (continued)	4 (90)	17.11.26 (5. DS)	<i>ICBC lab tutorial 1: Initial step for start, circuit simulation in LTspice</i>
11	20.11.26 (1. DS)	8. Phase locked loops and synthesizers (37/47)			
12	20.11.26 (2. DS)	8. Phase locked loops and synthesizers (continued)			
13	24.11.26 (5. DS)	9. Clock data recovery (49/57)	5-6 (180)	27.11.26 (1.-2. DS)	<i>ICBC lab tutorial 2: Simulation of common-source amplifiers</i>
14	11.12.26 (1. DS)	9. Clock data recovery (continued)			
15	11.12.26 (2. DS)	10. Multiplexer and demultiplexer (16/19) 11. Frequency dividers (21/24)	7-8 (180)	18.12.26 (1.-2. DS)	<i>ICBC lab tutorial 3: Simulation of further amplifiers</i>
			9-10 (180)	8.1.27 (1.-2. DS)	<i>ICBC lab tutorial 4: Quadrature phase ring oscillator</i>
			11 (90)	12.1.27 (5. DS)	<i>ICBC theory tutorial III: Phase-locked loop</i>
			12-13 (180)	22.1.27 (1.-2. DS)	<i>ICBC lab tutorial 5: Phase detector</i>
16	29.1.27 (1. DS)	11. Frequency dividers (21/24) 12. Transceiver implementation examples (8/8)			
17	29.1.27 (2. DS)	13. Chip design procedure (11/12) 14. Conclusions (6/6)	14 (90)	2.2.27 (5. DS)	Open questions