

Computer Engineering (COMP)

		Study Profiles:	
		I. Computer Engineering	II. Media Engineering
A) Catalogue CORE			
1.	Advanced Compiler Engineering	X	
2.	Computer Arithmetic Fundamentals	X	
3.	Digital Image Processing 1		X
4.	Digital Speech Transmission		X
5.	DSP Design Methodologies and Tools	X	
6.	Robotics and Man-Machine-Interaction 1		X
7.	Special-Purpose Operating Systems	X	
8.	Technical Acoustics		X
B) Catalogue ELECTIVE			
1.	<i>Remaining modules of catalogue CORE</i>	X	X
2.	Acoustic Virtual Reality		X
3.	Ad-Hoc Networks: Architectures and Protocols	X	
4.	Advanced Coding and Modulation	X	X
5.	Advanced Topics in Signal Processing and Communication		X
6.	Advanced Topics of Virtual Reality		X
7.	Artificial Intelligence		X
8.	Audio Signal Enhancement		X
9.	Computer Arithmetic Advanced Topics	X	
10.	Computer Graphics		X
11.	Current Topics in Media Computing and HCI		X
12.	Digital Image Processing 2		X
13.	Embedded Systems	X	
14.	Electronic Design Automation	X	
15.	Estimation, Information Fusion and Machine Learning		X
16.	Fundamentals of Big Data Analytics		X
17.	Functional Safety and System Dependability	X	
18.	High-Performance Computing	X	
19.	Image Data Analysis		X
20.	Machine Learning		X
21.	Machine Learning for Speech and Audio Processing		X
22.	Mathematical Principles of Machine Learning		X
23.	Medical Acoustics: Technologies for Hearing Systems and Ultrasound		X
24.	Medical Acoustics: Audiology and Voice		X
25.	Multimedia Content Analysis		X
26.	Optimization in Engineering	X	X
27.	Principles and Design of Communication Systems and Networks	X	X
28.	Psychoacoustics and Methods for Listening Experiments		X
29.	Robotics and Man-Machine-Interaction 2	X	X
30.	Virtual Reality		X
31.	Visual Media Communication		X
32.	VLSI Architectures for Digital Signal Processing - Architectures	X	

33. VLSI Architectures for Digital Signal Processing - Fundamentals	X	
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C) Catalogue LABORATORY

1. Acoustic Virtual Reality	X	X
2. Advanced Network Programming - Switching and Routing	X	X
3. Analog and Mixed Signal Electronic	X	X
4. Digital Mobile Receiver Design: Synchronization and Detection	X	X
5. Machine Learning	X	X
6. Network Programming	X	X
7. Network Simulators	X	X
8. Optimization Lab for Communication and Signal Processing Using Matlab	X	X
9. SMEAGOL - Small Embedded Advanced and Generic Objects	X	X
10. Stochastic Networks - Analysis and Evaluation Supported by Modern Simulation Tools	X	X
11. Wireless Communications: Software Radio Implementations	X	X
12. Acoustics	X	X
13. Matlab Advanced - Digital Signal Processing	X	X
14. Radar	X	X
15. Real-Time Audio Processing	X	X

D) Catalogue PROJECT

1. Communication and Multimedia	X	X
2. Electromagnetic Noise in Power Electronics	X	X
3. Programming Embedded Multicore Systems	X	X
4. Algorithms and Practice of the Signal Processing	X	X
5. Medical Acoustics	X	X
6. Circuit and RF Design	X	X
7. Technical Acoustics	X	X

Please note that some information may have changed. You can find up-to-date information on [RWTHOnline](https://www.rwth-aachen.de).