

	<b>Documented proof of knowledge in computer science covering at least 32 CP. Of these, at least 6 CP each are from the areas listed under items 1 and 2 and at least 6 CP each from two of the three areas listed under items 3-5:</b>	
		ECTS
<b>1. Algorithms and data structures:</b>		
Basics of algorithms as well as runtime complexity and data structures	Data Structure Through C++ = 4 CP Design and Analysis of Algorithms = 4 CP Total Credit Points = 8 CP	6
<b>2. Practical computer science:</b>		
Basics of programming, object- oriented programming, and software engineering	Data structure through C++ Lab = 2 CP Object Oriented Programming Through Java Lab = 2 CP Software engineering Lab = 2 CP Web Technologies Lab = 2 CP Total Credit Points = 8 CP	6
<b>3. Theoretical computer science:</b>		
Formal languages as well as automata and complexity theory;	Formal Language and Automate theory = 4 CP Business Econ	
<b>4. Computer architectures:</b>		
Switching algebra, sequential logic, pipelines, storage hierarchy, and distributed systems and networks;	Database Management Systems = 4 CP Cryptography and Network System = 4 CP Data Communication and Computer Networks = 4 CP Compiler Design = 4 CP Total Credit Points = 16 CP	12
<b>5. Foundations in Mathematics:</b>		
Vector spaces, linear mappings and the analysis of functions in one variable and of sequences and series.	Mathematical foundations of Computer Science = 4 CP Mathematics - IV = 4 CP Total Credit Points = 8 CP	6
<b>Further knowledge in Computer Science:</b>	Computer Networks Mobile Computing Web services and Service oriented architecture Internet of things	