

Computer Science (CS) BSc																		
Matriculation Fall 2019																		
Program-Specific Modules			Type	Assessment	Period	Status ¹	Sem.	CP	Jacobs Track Modules (General Education)			Type	Assessment	Period	Status ¹	Sem.	CP	
Year 1 - CHOICE																		
Take the mandatory CHOICE modules listed below, this is a requirement for the Computer Science program.																		
Unit: Programming, Algorithms, and Data Structures (default minor choice modules)									Unit: Methods / Skills									
CH-230	Module: Programming in C and C++					m	1	7.5	JTMS-MAT-09	Module: Calculus and Elements of Linear Algebra I						m	1	5
CH-230-A	Programming in C and C++		Lecture	Written examination	Examination period			2.5	JTMS-09	Calculus and Elements of Linear Algebra I			Lecture	Written examination	Examination period			5
CH-230-B	Programming in C and C++ Tutorial		Tutorial					5	JTMS-MAT-10	Module: Calculus and Elements of Linear Algebra II						m	2	5
CH-231	Module: Algorithms and Data Structures					m	2	7.5	JTMS-10	Calculus and Elements of Linear Algebra II			Lecture	Written examination	Examination period			5
CH-231-A	Algorithms and Data Structures		Lecture	Written examination	Examination period			5	Unit: Language									
Unit: Computer Science, Robotics, and Intelligent Systems									German is default language. Native German speakers take modules in another offered language.									
CH-232	Module: Introduction to Computer Science					m	1	7.5	JTTLA-xxx	Module: Language 1						m	1	2.5
CH-232-A	Introduction to Computer Science		Lecture	Written examination	Examination period			5	JTTLA-xxx	Language 1			Seminar	Various	Various	me		
CH-220	Module: Introduction to Robotics and Intelligent Systems					m	2	7.5	JTTLA-xxx	Module: Language 2						m	2	2.5
CH-220-A	Introduction to Robotics and Intelligent Systems		Lecture					5	JTTLA-xxx	Language 2			Seminar	Various	Various	me		
CH-220-B	Introduction to Robotics and Intelligent Systems Lab		Lecture Lab	Written examination	Examination period			2.5										
Unit: CHOICE (own selection)																		
Take two further CHOICE modules from those offered for all other study programs. ²																		
Year 2 - CORE																		
Take all CORE modules listed below or replace mandatory elective (me) modules with suitable CORE modules from other study programs. ³																		
Unit: Advanced Computer Science I (default minor advanced modules)									Unit: Methods / Skills									
CO-560	Module: Databases and Web Services					m	3	7.5	JTMS-MAT-12	Module: Probability and Random Processes						m	3	5
CO-560-A	Databases and Web Services - Lecture		Lecture	Written examination	Examination period			5	JTMS-12	Probability and Random Processes			Lecture	Written examination	Examination period			5
CO-560-B	Databases and Web Services - Project		Project	Project assessment	During the semester			2.5	Take one of the two listed mandatory elective methods modules:									
CO-561	Module: Software Engineering					m	4	7.5	CO-501	Module: Discrete Mathematics						me	4	5
CO-561-A	Software Engineering		Lecture	Written examination	Examination period			2.5	CO-501-A	Discrete Mathematics			Lecture	Written examination	Examination period			5
CO-561-B	Software Engineering Project		Project	Project assessment	During the semester			5	JTMS-MAT-13	Module: Numerical Methods⁴						me	4	5
Unit: Advanced Computer Science II									JTMS-13 Numerical Methods Lecture Written examination Examination period									
CO-562	Module: Operating Systems					m	3	7.5	Unit: Language									
CO-562-A	Operating Systems		Lecture	Written examination	Examination period			5	German is default language. Native German speakers take modules in another offered language.									
CO-563	Module: Automata, Computability, and Complexity					m	4	7.5	JTTLA-xxx	Module: Language 3						m	3	2.5
CO-563-A	Automata, Computability, and Complexity		Lecture	Written examination	Examination period			5	JTTLA-xxx	Language 3			Seminar	Various	Various	me		
Unit: Advanced Computer Science III									Unit: Language 4									
CO-564	Module: Computer Networks					me	3	5	JTTLA-xxx	Language 4			Seminar	Various	Various	me		
CO-564-A	Computer Networks		Lecture	Written examination	Examination period			2.5										
CO-565	Module: Legal and Ethical Aspects of Computer Science					me	3	2.5										
CO-565-A	Legal and Ethical Aspects of Computer Science		Lecture	Poster presentation	Examination period			5										
CO-566	Module: Secure and Dependable Systems					me	4	5										
CO-566-A	Secure and Dependable Systems		Lecture	Written examination	Examination period			2.5										
CO-567-A	Module: Academic Skills in Computer Science					me	4	2.5										
CO-567-A	Academic Skills in Computer Science		Seminar	Project assessment	Examination period			5										
Year 3 - CAREER																		
CA-INT-900	Module: Summer Internship					m	4/5	15	Unit: Big Questions									
CA-INT-900-0	Summer Internship			Report/Business Plan	During the 5 th semester			10	JTBJQ-BQ-xxx	Module: Big Questions						m	5/6	
CA-CS-800	Module: Thesis / Seminar CS					m	6	15	JTBJQ-xxx				Lecture	Various	Various	me		10
CA-CS-800-T	Thesis CS		Thesis	Thesis	15th of May			12	Unit: Community Impact Project									
CA-CS-800-S	Seminar CS		Seminar	Presentation	During the semester			3	JTCI-CI-950	Module: Community Impact Project						m	5	5
Unit: Specialization CS									JTTCI-950 Community Impact Project Project Project Examination period									
Take a total of 15 CP Specialization Modules																		
CA-S-CS-801	Module: Computer Graphics					me	5	5										
CA-S-CS-801-A	Computer Graphics		Lecture	Written examination	Examination period			5										
CA-S-CS-802	Module: Image Processing					me	6	5										
CA-S-CS-802-A	Image Processing		Lecture	Written examination	Examination period			5										
CA-S-CS-803	Module: Distributed Algorithms					me	5	5										
CA-S-CS-803-A	Distributed Algorithms		Lecture	Written examination	Examination period			5										
CA-S-CS-804	Module: Web Application Development					me	6	5										
CA-S-CS-804-A	Web Application Development		Lecture	Written examination	Examination period			2.5										
CA-S-CS-804-B	Web Application Development		Project	Project assessment	During the semester			2.5										
CA-S-xxx	Specialization electives (from RIS, ECE study programs)⁴					me	5/6	5										
Total CP															180			

¹ Status (m = mandatory, me = mandatory elective)² For a full listing of all CHOICE / CORE / CAREER / Jacobs Track modules please consult the CampusNet online catalogue and /or the study program handbooks.³ For details please see the CS program handbook⁴ Students who take a minor in Mathematics have to choose Numerical Methods module.