

Study and Examination Plan

Computer Science (CS) BSc														
Matriculation Fall 2022														
Program-Specific Modules							Jacobs Track Modules (General Education)							
	Type	Assessment	Period	Status ¹	Sem.	CP		Type	Assessment	Period	Status ¹	Sem.	CP	
Year 1 - CHOICE						45							15	
<i>Take the mandatory CHOICE modules listed below, this is a requirement for the Computer Science program.</i>														
Unit: Programming, Algorithms, and Data Structures (default minor choice modules)						15	Unit: Methods / Skills						10	
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		
CH-230-B	Programming in C and C++ Tutorial	Tutorial	Practical assessment	During the semester			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		
CH-231-A	Algorithms and Data Structures	Lecture	Written examination	Examination period			15	Unit: Language						
Unit: Computer Science, Robotics, and Intelligent Systems						15	German is default language. Native German speakers take modules in another offered language.							
CH-232	Module: Introduction to Computer Science²				m	1	7.5	JTLA-xxx	Module: Language 1			m	1	2.5
CH-232-A	Introduction to Computer Science	Lecture	Written examination	Examination period			5	JTLA-xxx	Language 1	Seminar	Various	Various	me	
CH-220	Module: Introduction to Robotics and Intelligent Systems				m	2	7.5	JTLA-xxx	Module: Language 2			m	2	2.5
CH-220-A	Introduction to Robotics and Intelligent Systems	Lecture					5	JTLA-xxx	Language 2	Seminar	Various	Various	me	
CH-220-B	Introduction to Robotics and Intelligent Systems Lab	Lab	Written examination	Examination period			2.5							
Unit: CHOICE (own selection)						1/2	15							
<i>Take two further CHOICE modules from those offered for all other study programs.³</i>														
Year 2 - CORE						45							15	
<i>Take all CORE modules listed below or replace mandatory elective (me) modules with suitable CORE modules from other study programs.²</i>														
Unit: Advanced Computer Science I (default minor advanced modules)						15	Unit: Methods / Skills						10	
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	<i>Take one of the two listed mandatory elective methods modules:</i>						
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		
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						15	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			7.5	German is default language. Native German speakers take modules in another offered language.						
CO-563	Module: Automata, Computability, and Complexity				m	4	7.5	JTLA-xxx	Module: Language 3			m	3	2.5
CO-563-A	Automata, Computability, and Complexity	Lecture	Written examination	Examination period			7.5	JTLA-xxx	Language 3	Seminar	Various	Various	me	
Unit: Advanced Computer Science III						15	JTLA-xxx	Module: Language 4			m	4	2.5	
CO-564	Module: Computer Networks				me	3	5	JTLA-xxx	Language 4	Seminar	Various	Various	me	
CO-564-A	Computer Networks	Lecture	Written examination	Examination period			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			2.5							
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			2.5							
Year 3 - CAREER						45							15	
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			15	JTBO-BQ-xxx	Module: Big Questions			m	5/6	
CA-CS-800	Module: Thesis / Seminar CS				m	6	15	JTBO-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	ITCI-CL-950	Module: Community Impact Project			m	5	5
Unit: Specialization CS						m	5/6	15	ITCI-950	Community Impact Project	Project	Project	Examination period	
<i>Take a total of 15 CP Specialization Modules</i>														
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 Development⁵				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, DE study programs) ⁶	Lecture	Written examination	Examination period			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 handbook.

⁴ Students who take a minor in Mathematics have to choose Numerical Methods module.

⁵ Students can optionally also take the module in the 2nd semester