

# Course of Study Computer Science in Engineering (Study Cohort w22)

Sample course plan I Bachelor Computer Science in Engineering (IIWBS) Dual study program  
 Specialisation I. Computer Science, Specialisation II. Mathematics & Engineering Science, Specialisation III.

Legend:

Core Qualification Compulsory	Specialisation Compulsory	Focus Compulsory	Thesis Compulsory
Core Qualification Elective Compulsory	Specialisation Elective Compulsory	Focus Elective Compulsory	Interdisciplinary complement

Subject Specific Focus											
1	<b>Discrete Algebraic Structures</b> Discrete Algebraic Structures VL 2 Discrete Algebraic Structures GÜ 2	<b>Electrical Engineering II: Alternating Current Networks and Basic Devices</b> Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3 Electrical Engineering II: Alternating Current Networks and Basic Devices GÜ 2	<b>Numerical Mathematics I</b> Numerical Mathematics I VL 2 Numerical Mathematics I GÜ 2	<b>Signals and Systems</b> Signals and Systems VL 3 Signals and Systems GÜ 2	<b>Introduction to Communications and Random Processes</b> Introduction to Communications and Random Processes VL 3 Introduction to Communications and Random Processes HÜ 1 Introduction to Communications and Random Processes GÜ 1						
2						<b>Machine Learning I</b> Machine Learning I VL 2 Machine Learning I GÜ 3					
3											
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7	<b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b> Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3 Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2	<b>Automata Theory and Formal Languages</b> Automata Theory and Formal Languages VL 2 Automata Theory and Formal Languages GÜ 2	<b>Computer Engineering</b> Computer Engineering VL 3 Computer Engineering GÜ 1	<b>Stochastics</b> Stochastics VL 2 Stochastics GÜ 2	<b>Introduction to Control Systems</b> Introduction to Control Systems VL 2 Introduction to Control Systems GÜ 2						
8						<b>Bachelor thesis (dual study program)</b>					
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13	<b>Mathematics I</b> Mathematics I VL 4 Mathematics I HÜ 2 Mathematics I GÜ 2	<b>Foundations of Management</b> Introduction to Management VL 3 Management Tutorial GÜ 2	<b>Computernetworks and Internet Security</b> Computer Networks and Internet Security VL 3 Computer Networks and Internet Security GÜ 1	<b>Embedded Systems</b> Embedded Systems VL 3 Embedded Systems GÜ 1 Embedded Systems PBL 1	<b>Practical Course IIW</b> Practical Course IIW PBL 8						
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19						<b>Mathematics II</b> Mathematics II VL 4 Mathematics II HÜ 2 Mathematics II GÜ 2	<b>Mathematics III</b> Analysis III VL 2 Analysis III GÜ 1 Analysis III HÜ 1 Differential Equations 1 VL 2 Differential Equations 1 GÜ 1 Differential Equations 1 HÜ 1	<b>Seminars Computer Science</b> Introductory Seminar Computer Science II SE 2 Introductory Seminar Computer Science I SE 2	<b>Practical module 5 (dual study program, Bachelor's degree)</b> Practical term 5 0		
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21										<b>Practical module 4 (dual study program, Bachelor's degree)</b> Practical term 4 0	<b>Databases</b> Databases VL 3 Databases - Exercise GÜ 2
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25						<b>Practical module 1 (dual study program, Bachelor's degree)</b> Practical term 1 0	<b>Programming Paradigms</b> Programming Paradigms VL 2 Programming Paradigms HÜ 1 Programming Paradigms PR 2	<b>Algorithms and Data Structures</b> Algorithms and Data Structures VL 4 Algorithms and Data Structures GÜ 1	<b>Electrical Power Systems I: Introduction to Electrical Power Systems</b> Electrical Power Systems I: Introduction to Electrical Power Systems VL 3 Electrical Power Systems I: Introduction to Electrical Power Systems GÜ 2		
26											
27											
28	<b>Practical module 2 (dual study program, Bachelor's degree)</b> Practical term 2 0	<b>Practical module 3 (dual study program, Bachelor's degree)</b> Practical term 3 0									
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Linking theory and practice (dual study program, Bachelor's degree) - 6LP  
 Technical Complementary Course for Computational Science and Engineering Bachelor - 12LP

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.

