Appendix 1a - Mandatory Module and Examination Plan for World Track



	Program-Specific Modules	Type	Status ¹	Semester	Credits		Jacobs Track Modules (General Education)	Type	Status ¹	Semester	Credit
Year 1 - CH	OICE				45						20
Take the manda	tory CHOICE module listed below, this is a requirement for the CS	program.									
CH08-GenCS	Module: General Computer Science		m		15	JT-ME-MethodsMath	Module: Methods / Mathematics		m		7,5
CH08-320101	Introduction to Computer Science	Lecture	m	1	5	JT-ME-120103	Calculus I	Lecture	m	1	2,5
CH08-320142	Programming in C++ I	Lab	m	1	2,5	JT-ME-120104	Calculus II	Lecture	m	1	2,5
CH08-320201	Algorithms and Data Structures	Lecture	m	2	5	JT-ME-120122	Foundations of Linear Algebra I	Lecture	m	2	2,5
CH08-320143	Programming in C++ II	Lab	m	2	2,5	JT-SK-Skills	Module: Skills ⁵		m		5
						JT-SK-320111	Programming in C I	Lecture	m	1	2,5
	Module: CHOICE (own selection)		e	1/2	30	JT-SK-320112	Programming in C II	Lecture	m	2	2,5
						JT-TA-TriArea	Module: Triangle Area		m		2,5
Students take two further CHOICE modules from those offered for all other study programs. ²							Take one course from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³		me	1/2	2,5
						JT-LA-Language	Module: Language		m		5
							Take two German courses (2,5 ECTS each).	Seminar	me	1/2	5
							Native German speakers take courses in another offered language				
						CA01-CarAdv	Career Advising ⁴		m		
Year 2 - CO	RE				45		•				20
	odules or replace one with a CORE module from a different study	program. ²									
CO19-ApplCS	Module: Applied Computer Science	1 0	me		15	JT-ME-MethodsMath	Module: Methods / Mathematics		m		7,5
CO19-320302	Databases and Web Services	Lecture	m	3	5	JT-ME-120201	Elements of Probability	Lecture	m	3	2,5
CO19-320322	Computer Graphics	Lecture	m	3	5	JT-ME-120113	Foundations of Linear Algebra II	Lecture	m	3	2,5
CO19-320212	Software Engineering	Lecture	m	4	5	JT-ME-120202	Numerical Methods I	Lecture	m	4	2,5
CO20 TL-CC	Module: Technical Computer Science		me		15	JT-TA-TriArea	Module: Triangle Area		m		7,5
CO20-TechCS											
CO20-320202	Operating Systems	Lecture	m	3	5		Take three courses from the triangle (BUSINESS, TECHNOLOGY &		me	3/4	7,5
	•	Lecture Lecture	m m	3	5 5		Take three courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³		me	3/4	7,5
CO20-320202 CO20-320241 CO20-320301	Operating Systems Computer Architecture and Programming Languages Computer Networks				5 5		9 1		me	3/4	7,5
CO20-320202 CO20-320241 CO20-320301 CO21-TheoCS	Operating Systems Computer Architecture and Programming Languages Computer Networks Module: Theoretical Computer Science	Lecture	m	3 4	5 5 15	JT-LA-Language	INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³ Module: Language		me m		5
CO20-320202 CO20-320241 CO20-320301 CO21-TheoCS CO21-320211	Operating Systems Computer Architecture and Programming Languages Computer Networks Module: Theoretical Computer Science Formal Languages and Logic	Lecture	m m	3	5 5 15 5	JT-LA-Language	INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³ Module: Language Take two German courses (2,5 ECTS each).	Seminar		3/4	ŕ
CO20-320202 CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203	Operating Systems Computer Architecture and Programming Languages Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems	Lecture Lecture Lecture	m m me	3 4 3 4	5 5 15 5 5		INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³ Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language	Seminar	m		5
CO20-320202 CO20-320241 CO20-320301 CO21-TheoCS CO21-320211	Operating Systems Computer Architecture and Programming Languages Computer Networks Module: Theoretical Computer Science Formal Languages and Logic	Lecture Lecture	m m me m	3 4 3	5 5 15 5	JT-LA-Language CA01-CarAdv	INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³ Module: Language Take two German courses (2,5 ECTS each).	Seminar	m		5
CO20-320202 CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352	Operating Systems Computer Architecture and Programming Languages Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity	Lecture Lecture Lecture	m m me m m	3 4 3 4	5 5 15 5 5		INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³ Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language	Seminar	m me		5
CO20-320202 CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352 Year 3 - CA	Operating Systems Computer Architecture and Programming Languages Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity	Lecture Lecture Lecture	m m me m m	3 4 3 4	5 5 15 5 5 5		INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³ Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language Career Advising* Module: Triangle Area	Seminar	m me	3/4	5 5 5
CO20-320202 CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352 Year 3 - CAl	Operating Systems Computer Architecture and Programming Languages Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity REER	Lecture Lecture Lecture	m m me m m m	3 4 4 4	5 5 15 5 5 5 5	CA01-CarAdv	INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³ Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language Career Advising*	Seminar	m me		5 5
CO20-320202 CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352 Year 3 - CAl	Operating Systems Computer Architecture and Programming Languages Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity REER Module: Internship / Study Abroad Module: Project/Thesis CS	Lecture Lecture Lecture	m me m m m	3 4 4 4	5 5 15 5 5 5 45	CA01-CarAdv	INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³ Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language Career Advising Module: Triangle Area Take two courses from the triangle (BUSINESS, TECHNOLOGY &	Seminar	m me m	3/4	5 5 5
CO20-320202 CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352 Year 3 - CA CA02 / CA03 CA10-CS CA10-CS CA10-320305	Operating Systems Computer Architecture and Programming Languages Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity REER Module: Internship / Study Abroad	Lecture Lecture Lecture	m me m m m	3 4 3 4 4 5	5 5 15 5 5 5 45	CA01-CarAdv JT-TA-TriArea	INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³ Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language Career Advising Module: Triangle Area Take two courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³	Seminar	m me m	3/4	5 5 5
CO20-320202 CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203	Operating Systems Computer Architecture and Programming Languages Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity REER Module: Internship / Study Abroad Module: Project/Thesis CS Project CS	Lecture Lecture Lecture	m m me m m m m m m m m m m m m m m m m	3 4 3 4 4 5	5 5 15 5 5 5 45 20	CA01-CarAdv JT-TA-TriArea	INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³ Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language Career Advising Module: Triangle Area Take two courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³	Seminar	m me m	3/4	5 5 5

¹ Status (m = mandatory, e = elective, 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 module handbook (on our website).

³ You are required to take six Triangle Area courses in total. Select two from each of the three triangle areas (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT).

⁴ Mandatory component of the Jacobs University's Counseling and Advising Scheme.

⁵CS students may also take the *Programming in Python* skills courses, but the received credits will not count towards the 180 ECTS credits required by the major nor do they count for the GPA.

Appendix 1b - Mandatory Module and Examination Plan for Campus Track



	1 Fall 2018										
	Program-Specific Modules	Туре	Status1	Semester	Credits		Jacobs Track Modules (General Education)	Туре	Status ¹	Semester	Credits
Year 1 - CHO	OICE				45						20
Take the mandat	atory CHOICE module listed below, this is a requirement for the CS	program.									
CH08-GenCS	Module: General Computer Science		m		15	JT-ME-MethodsMath	Module: Methods / Mathematics		m		7,5
CH08-320101	Introduction to Computer Science	Lecture	m	1	5	JT-ME-120103	Calculus I	Lecture	m	1	2,5
CH08-320142	Programming in C++ I	Lab	m	1	2,5	JT-ME-120104	Calculus II	Lecture	m	1	2,5
CH08-320201	Algorithms and Data Structures	Lecture	m	2	5	JT-ME-120122	Foundations of Linear Algebra I	Lecture	m	2	2,5
CH08-320143	Programming in C++ II	Lab	m	2	2,5	JT-SK-Skills	Module: Skills ⁵		m		5
	rogramming in C++ II	2.00	•••	-	2,5	JT-SK-320111	Programming in C I	Lecture	m	1	2,5
	Module: CHOICE (own selection)		e	1/2	30	JT-SK-320112	Programming in C II	Lecture	m	2	2,5
	Module: CHOTCE (Will Selection)			1/2	50	JT-TA-TriArea	Module: Triangle Area	Decture	m	-	2,5
Students take tw	wo further CHOICE modules from those offered for all other study	programs. 2				31 171 IIIIIIcu	Take one course from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³		me	1/2	2,5
						JT-LA-Language	Module: Language		m		5
							Take two German courses (2,5 ECTS each).	Seminar	me	1/2	5
							Native German speakers take courses in another offered language				-
						CA01-CarAdv	Career Advising ⁴		m		
Year 2 - COI	DE				45	CA01-CarAuv	euter 14 min		111		20
	NE nodules or replace one with a CORE module from a different study	program, 2			43						20
CO19-ApplCS	_ :	1 0	me		15	JT-ME-MethodsMath	Module: Methods / Mathematics		m		7,5
CO19-320302	Databases and Web Services	Lecture	m	3	5	JT-ME-120201	Elements of Probability	Lecture	m	3	2,5
CO19-320322	Computer Graphics	Lecture	m	3	5	JT-ME-120113	Foundations of Linear Algebra II	Lecture	m	3	2,5
CO19-320212	Software Engineering	Lecture	m	4	5	JT-ME-120202	Numerical Methods I	Lecture	m	4	2,5
CO20-TechCS	Module: Technical Computer Science		me		15	JT-TA-TriArea	Module: Triangle Area		m		7,5
	Operating Systems	Lecture	m	3	5		Take three courses from the triangle (BUSINESS, TECHNOLOGY &		me	3/4	7,5
CO20-320202									IIIC		
CO20-320202 CO20-320241	Computer Architecture and Programming Languages	Lecture	m	3	5		INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS 3		ille		
	Computer Architecture and Programming Languages Computer Networks	Lecture Lecture	m m	3 4	5 5		INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS	ı	ille		
CO20-320241 CO20-320301	Computer Networks					JT-LA-Language	Module: Language	·	m		5
CO20-320241 CO20-320301 CO21-TheoCS	Computer Networks		m		5	JT-LA-Language		Seminar		3/4	5
CO20-320241 CO20-320301 CO21-TheoCS CO21-320211	Computer Networks Module: Theoretical Computer Science	Lecture	m me	4	5 15	JT-LA-Language	Module: Language		m	3/4	
CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203	Computer Networks Module: Theoretical Computer Science Formal Languages and Logic	Lecture	m me m	3	5 15 5	JT-LA-Language CA01-CarAdv	Module: Language Take two German courses (2,5 ECTS each).		m	3/4	
CO20-320241	Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity	Lecture Lecture Lecture	m me m m	3 4	5 15 5 5		Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language		m me	3/4	
CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352	Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity	Lecture Lecture Lecture	m me m m	3 4	5 15 5 5 5		Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language		m me	3/4	5
CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352 Year 3 - CAI	Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity REER Module: Additional (4th) CORE module	Lecture Lecture Lecture	m me m m m m m m m m	3 4 4	5 15 5 5 5 45	CA01-CarAdv	Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language Career Advising ⁴ Module: Triangle Area Take two courses from the triangle (BUSINESS, TECHNOLOGY &	Seminar	m me m	3/4	5 5
CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352 Year 3 - CAI	Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity REER Module: Additional (4th) CORE module Module: Project/Thesis CS	Lecture Lecture Lecture	m me m m m m m m m m	3 4 4	5 15 5 5 5 45 15	CA01-CarAdv JT-TA-TriArea	Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language Career Advising ⁴ Module: Triangle Area Take two courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS 3	Seminar	m me m		5 5 5
CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352 Year 3 - CAI COXX	Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity REER Module: Additional (4th) CORE module Module: Project/Thesis CS Project CS	Lecture Lecture Lecture	m me m m m m m m m	3 4 4 4 5/6	5 15 5 5 5 45 45	CA01-CarAdv	Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language Career Advising ⁴ Module: Triangle Area Take two courses from the triangle (BUSINESS, TECHNOLOGY &	Seminar	m me m		5 5 5
CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352 Year 3 - CAI COXX CA10-CS CA10-320305 CA10-320306	Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity REER Module: Additional (4th) CORE module Module: Project/Thesis CS Project CS Thesis CS	Lecture Lecture Lecture	m me m m m m m m m m m m	3 4 4	5 15 5 5 5 45 45	CA01-CarAdv JT-TA-TriArea	Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language Career Advising ⁴ Module: Triangle Area Take two courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS 3	Seminar	m me m		5 5 5
CO20-320241 CO20-320301 CO21-TheoCS CO21-320211 CO21-320203 CO21-320352 Year 3 - CAI	Computer Networks Module: Theoretical Computer Science Formal Languages and Logic Secure and Dependable Systems Computability and Complexity REER Module: Additional (4th) CORE module Module: Project/Thesis CS Project CS	Lecture Lecture Lecture	m me m m m m m m m	3 4 4 4 5/6	5 15 5 5 5 45 45	CA01-CarAdv JT-TA-TriArea	Module: Language Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language Career Advising ⁴ Module: Triangle Area Take two courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS 3	Seminar	m me m		5 5 5

¹ Status (m = mandatory, e = elective, 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 module handbook (on our website).

³ You are required to take six Triangle Area courses in total. Select two from each of the three triangle areas (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT).

⁴ Mandatory component of the Jacobs University's Counseling and Advising Scheme.

⁵CS students may also take the *Programming in Python* skills courses, but the received credits will not count towards the 180 ECTS credits required by the major nor do they count for the GPA.